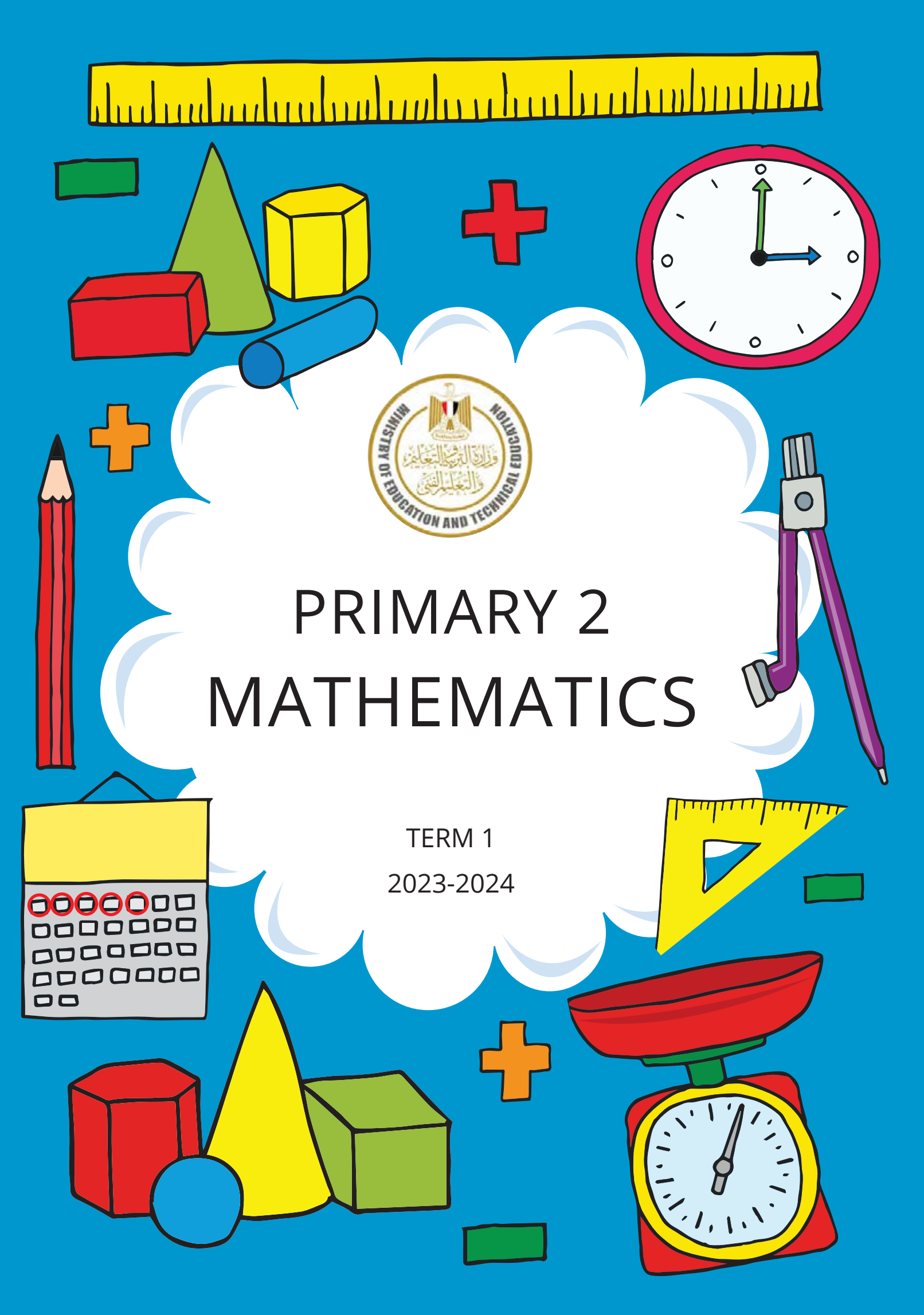


PRIMARY 2
MATHEMATICS

TERM 1

2023-2024

FOREWORD

This is a pivotal time in the history of the Ministry of Education and Technical Education (MOETE) in Egypt. We are embarking on the transformation of Egypt's K-12 education system starting in September 2018 with KG1, KG2 and Primary 1 continuing to be rolled out year after year until 2030. We are transforming the way in which students learn to prepare Egypt's youth to succeed in a future world that we cannot entirely imagine.

MOETE is very proud to present this new series of textbooks, Discover, with the accompanying digital learning materials that captures its vision of the transformation journey. This is the result of much consultation, much thought and a lot of work. We have drawn on the best expertise and experience from national and international organizations and education professionals to support us in translating our vision into an innovative national curriculum framework and exciting and inspiring print and digital learning materials.

The MOETE extends its deep appreciation to its own "Central Administration for Curriculum Development" (CACD) and "Discovery Education".

This transformation of Egypt's education system would not have been possible without the significant support of Egypt's current president, His Excellency President Abdel Fattah el-Sisi. Overhauling the education system is part of the president's vision of 'rebuilding the Egyptian citizen' and it is closely coordinated with the ministries of higher education & scientific research, Culture, and Youth & Sports. Education 2.0 is only a part in a bigger national effort to propel Egypt to the ranks of developing countries and to ensure a great future to all of its citizens.

WORDS FROM THE MINISTER OF EDUCATION & TECHNICAL EDUCATION

It is my great pleasure to celebrate this extraordinary moment in the history of Egypt where we launch a new education system designed to prepare a new Egyptian citizen proud of his Egyptian, Arab and African roots - a new citizen who is innovative, a critical thinker, able to understand and accept differences, competent in knowledge and life skills, able to learn for life and able to compete globally.

Egypt chose to invest in its new generations through building a transformative and modern education system consistent with international quality benchmarks. The new education system is designed to help our children and grandchildren enjoy a better future and to propel Egypt to the ranks of advanced countries in the near future.

The fulfillment of the Egyptian dream of transformation is indeed a joint responsibility among all of us; governmental institutions, parents, civil society, private sector and media. Here, I would like to acknowledge the critical role of our beloved teachers who are the role models for our children and who are the cornerstone of the intended transformation.

I ask everyone of us to join hands towards this noble goal of transforming Egypt through education in order to restore Egyptian excellence, leadership and great civilization.

My warmest regards to our children who will begin this journey and my deepest respect and gratitude to our great teachers.

Dr. Reda Hegazy
Minister of Education & Technical Education

NAME: _____

Contents

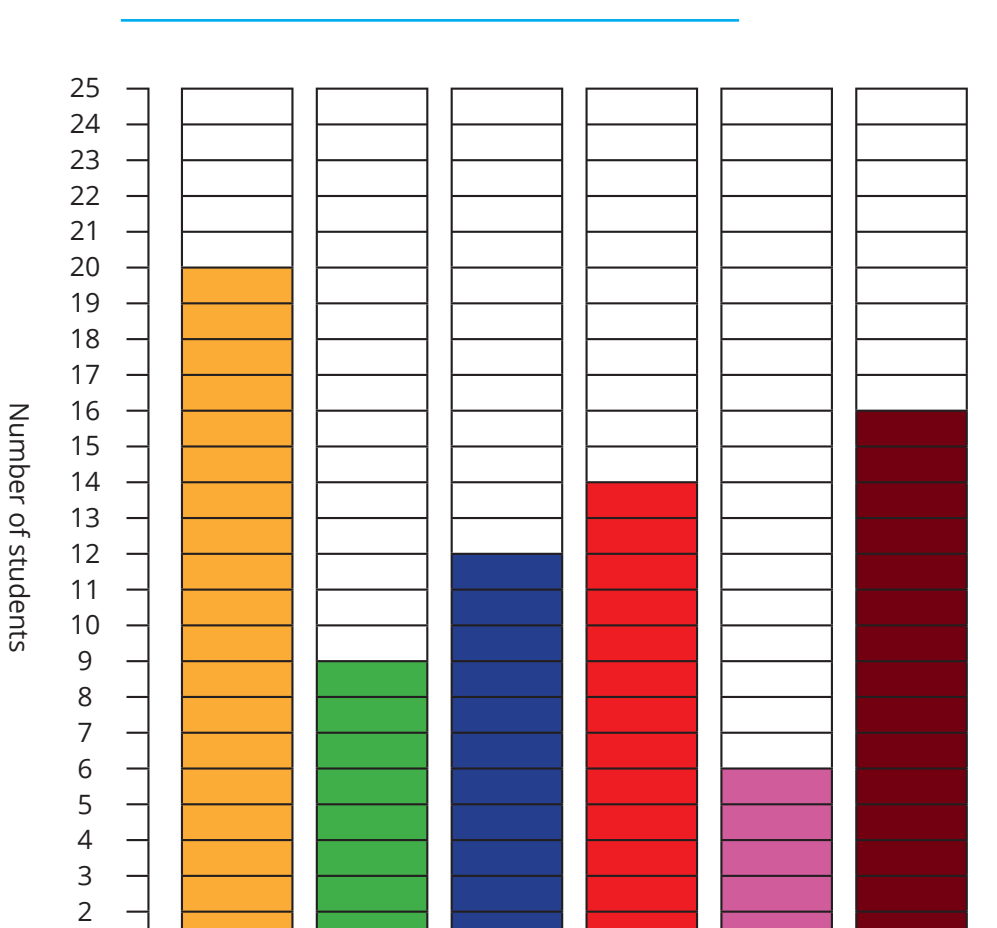
CHAPTER 1

LESSON 1: READING DATA

APPLY

Notice the following graph, then complete:

Title: _____ Birthdays: _____



Complete:

Number of student whose birthdays in April _____ .

Number of student whose birthdays in June _____ .

Title of the graph _____ .

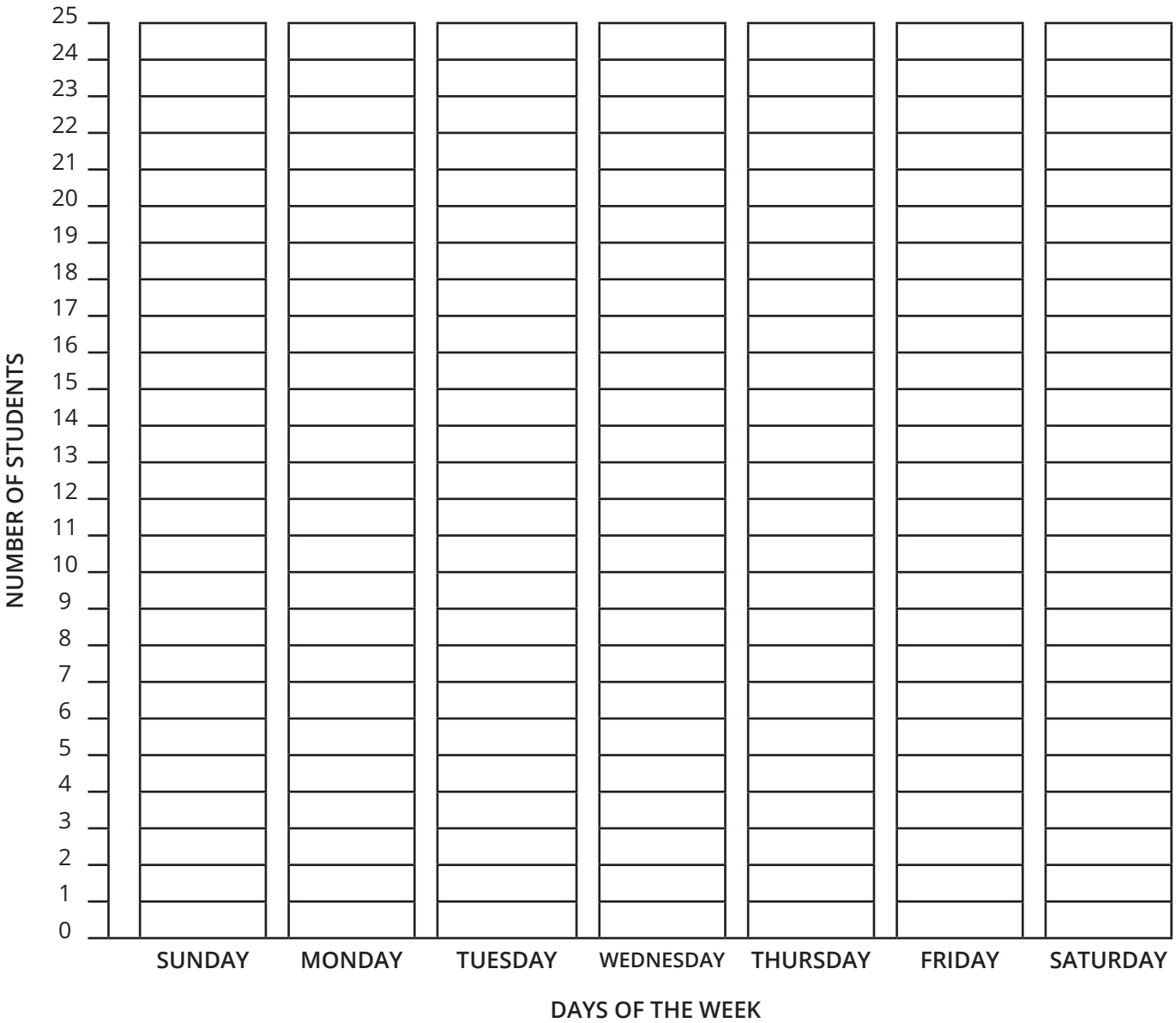
Number of student whose birthdays in _____ is 8.

LESSON 2: COLLECTING AND REPRESENTING DATA

APPLY

Directions: Work with your teacher to create a graph. Then answer questions about the data.

Title: _____



My favorite day of the week is _____

_____

Our class's favorite day of the week is _____

_____

Reflect

Directions: Reflect on your learning. Write or draw 3 things you noticed about the class bar graph.

LESSON 3: COMPARING DATA

APPLY

Directions: Use the Favorite Day of the Week graphs to answer the questions.

How many students like Tuesday best? _____

How many students like Friday best? _____

1. _____ ◯ _____
   Tuesday Friday

2. _____ ◯ _____
   Monday Friday

3. _____ ◯ _____
   Tuesday Thursday

4. _____ ◯ _____
   Sunday Wednesday

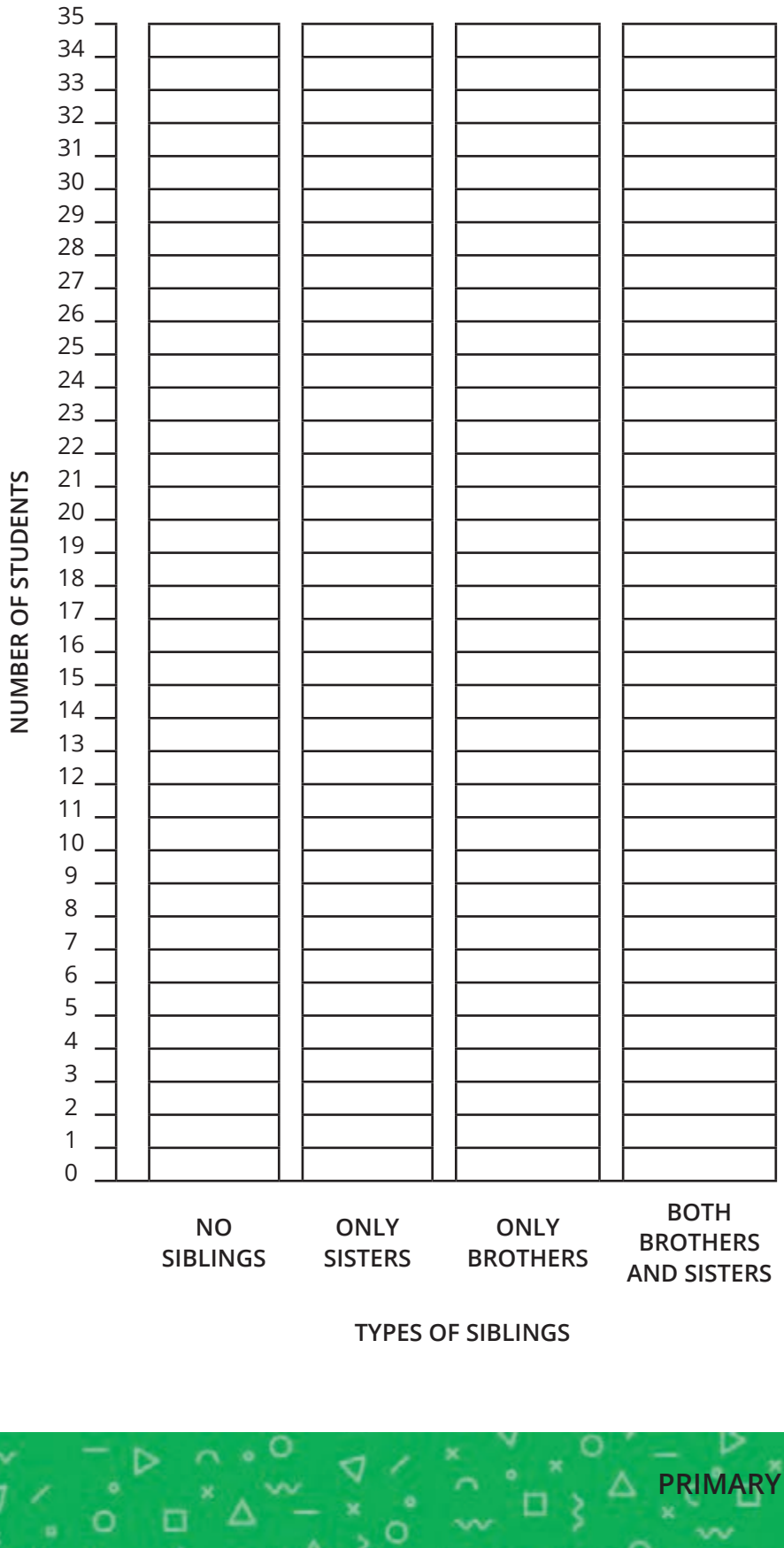
5. _____ ◯ _____
   Saturday Sunday

LESSON 4: REPRESENTING AND INTERPRETING DATA

APPLY

Directions: Work with your teacher to complete the graph.

Siblings in Our Family



Directions: Record the class data in the section below.

No siblings: _____ students

Only sisters: _____ students

Only brothers: _____ students

Both brothers and sisters: _____ students

Directions: List the class data from least to greatest.

_____ , _____ , _____ , _____

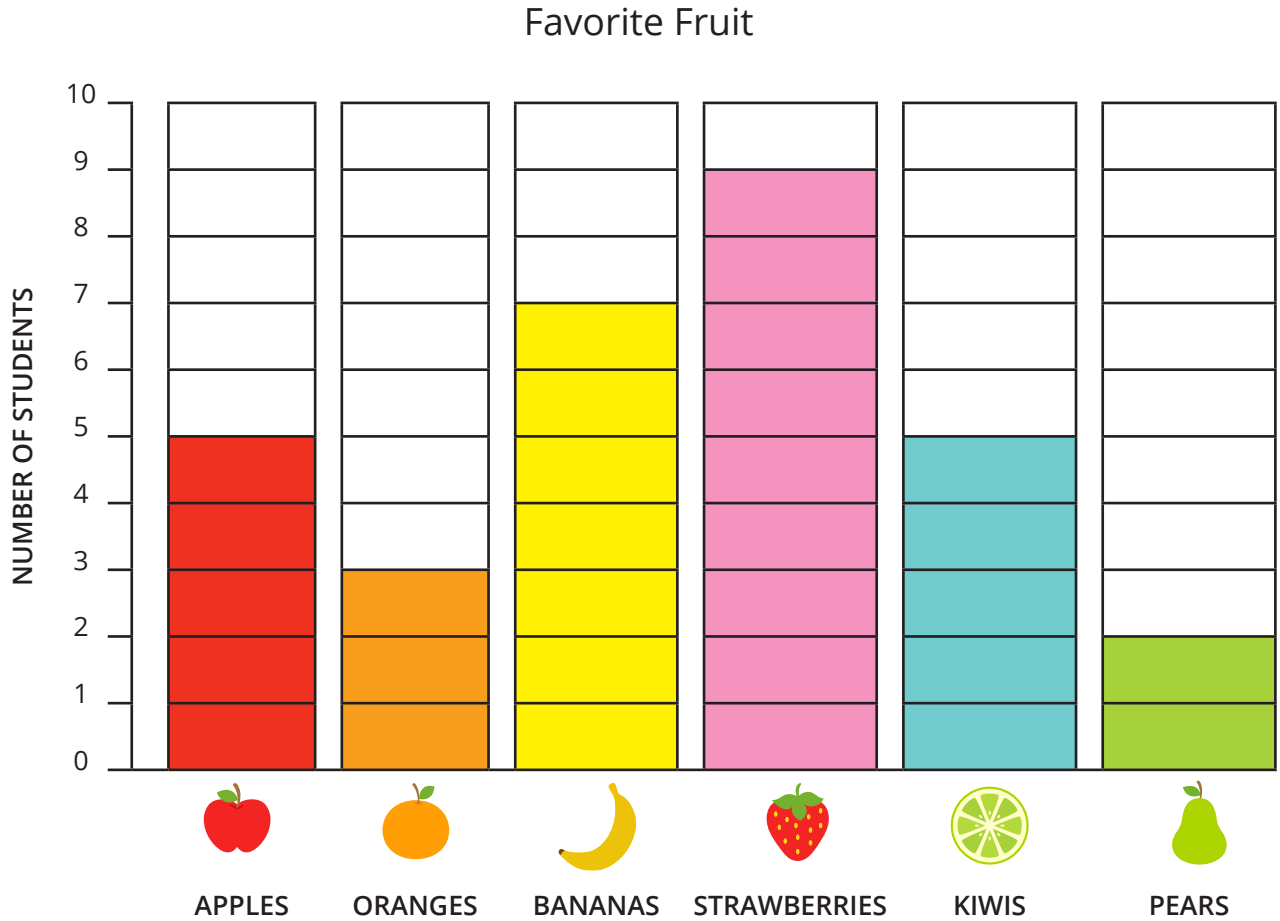
Reflect

Directions: Reflect on your learning. Write or draw something you learned or noticed about today's bar graph. For example, which category had the most votes? Which category were you in? Did your category have a lot of students or a few?

LESSON 5: REPRESENTING DATA WITH A SCALE OF 1

APPLY

Directions: Look at the Favorite Fruit graph and then answer questions about the data.



1. How many more people liked strawberries than pears? _____

2. How many people all together liked kiwis, apples, and oranges? _____

3. How many more people liked strawberries than oranges? _____

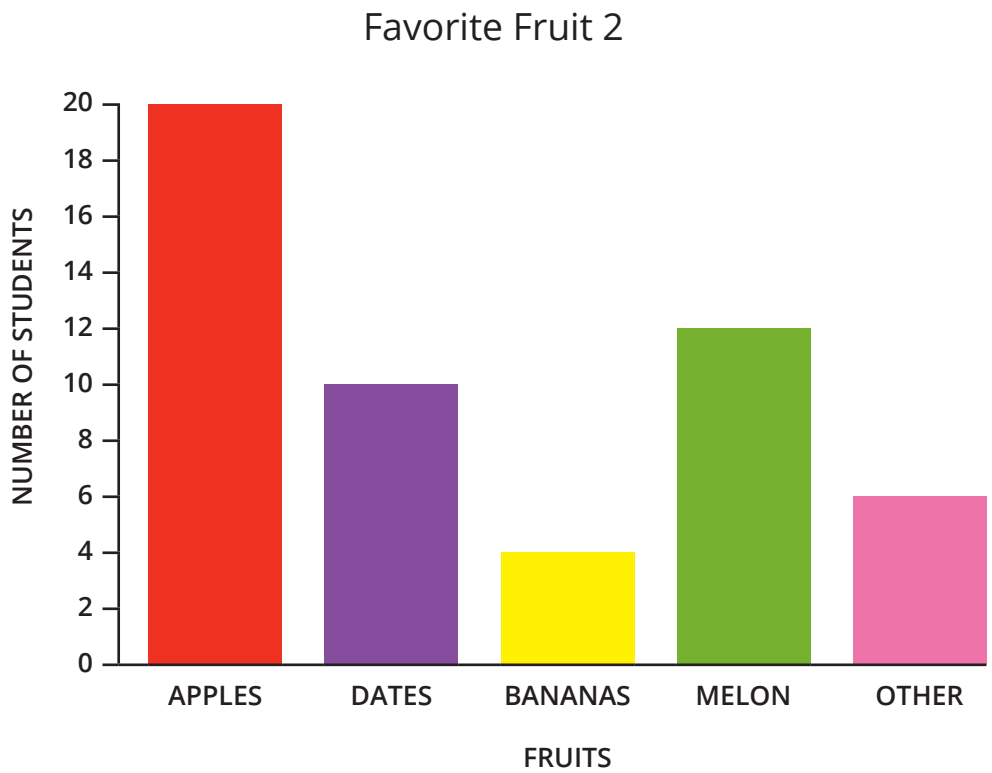
4. How many people in all liked apples, bananas, and pears? _____

5. How many people in total shared which fruit they liked best? _____

LESSON 6: REPRESENTING DATA WITH A SCALE OF 2

APPLY

Directions: Look at the Favorite Fruit 2 graph and then answer questions about the data.



1. How many students liked apples best? _____

2. How many students liked dates best? _____

3. Which fruit is liked the least? _____

4. Which two fruits did people like the best? _____

5. How many people liked some other kind of fruit that was not listed? _____

6. How many more students liked apples than dates? _____

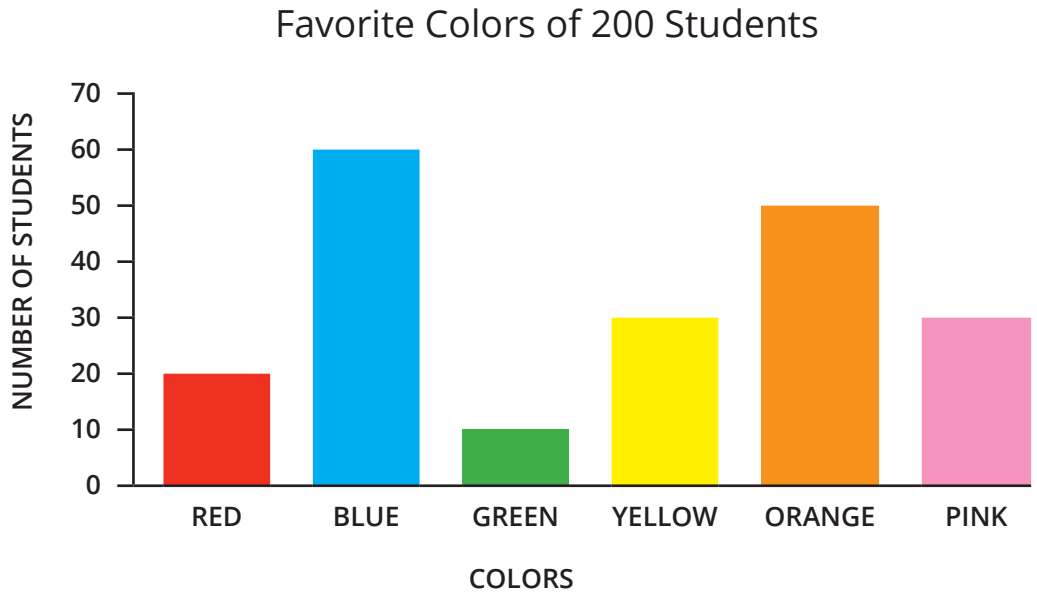
Reflect

Directions: Reflect on your learning. Did you prefer working with the graph with a scale of 1 or working with the graph with a scale of 2? Or did it not matter to you? Write or draw a picture to show your thinking and explain why.

LESSON 7: REPRESENTING DATA WITH A SCALE OF 10

APPLY

Directions: Look at the Favorite Colors graph and then answer questions about the data.



1. How many people liked red best? _____

2. How many people liked blue best? _____

3. How many people liked green best? _____

4. How many people liked yellow best? _____

5. How many people liked orange best? _____

6. How many people liked pink best? _____

7. How many people liked pink and blue (pink + blue)? _____

8. How many more people liked yellow than green (yellow - green)? _____

9. How many people liked red and blue (red + blue)? _____

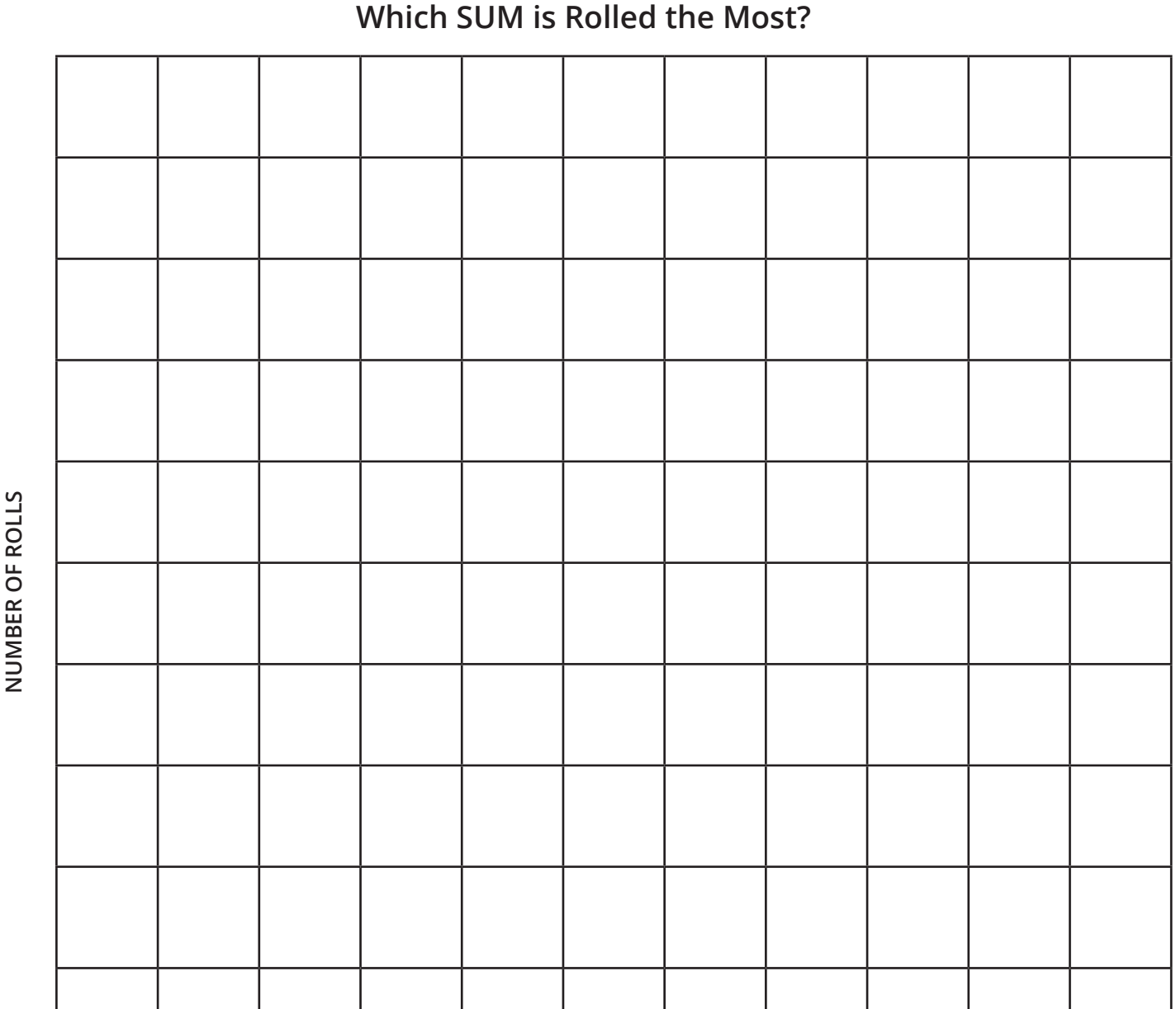
10. How many more people liked blue than orange (blue - orange)? _____

LESSON 8: BAR GRAPH

APPLY

Directions: Roll two dice, find the sum, and then shade in the matching box on the chart below. Remember to start at the bottom.

Which SUM is Rolled the Most?



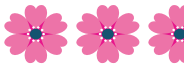
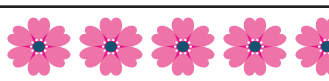
The winning SUM is _____

LESSON 9: PICTOGRAPH

APPLY

Directions: Look at the Pick A Flower pictograph and then answer the questions below.

Pick a Flower

MONDAY	
TUESDAY	
WEDNESDAY	
THURSDAY	
FRIDAY	

KEY
= 1 flower
= 2 flowers

1. How many flowers were picked on Monday? _____

2. How many flowers were picked on Thursday? _____

3. Did any two days have the same number of flowers picked? _____

4. How many flowers were picked on Monday and Tuesday? _____

5. Which day had the least number of flowers picked? _____

6. Which day had the most number of flowers picked? _____

7. How many more flowers were picked on Thursday than Wednesday? _____

8. How many flowers were picked on Monday, Tuesday, and Wednesday? _____

Reflect

Directions: Reflect on your learning. Then write at least one thing you learned about pictographs today.

Something I learned about pictographs today is

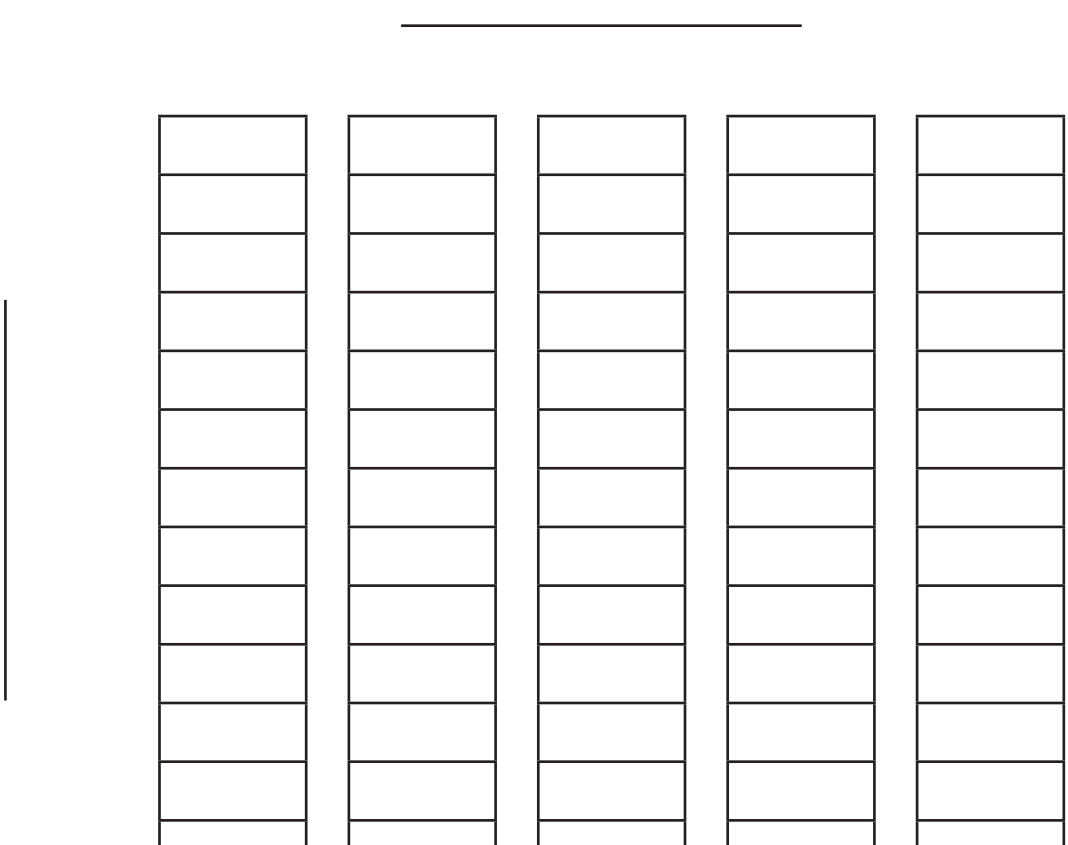
LESSON 10: GRAPH ELEMENTS

APPLY

Directions: Use the data from the Pick a Flower Pictograph to create a bar graph.

Graph elements:

- ☐ Title
- ☐ Scale
- ☐ Horizontal label
- ☑ Categories labeled
- ☐ Vertical label
- ☐ Colorful bars



CHAPTER 2

LESSON 1: ADDING DOUBLES

APPLY

Directions: Work with a partner to solve each problem. Write your answers in the blanks.

1 + 1 = _____

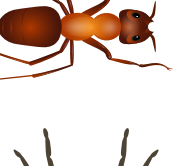
6 + 6 = _____

2 + 2 = _____

7 + 7 = _____

3 + 3 = _____

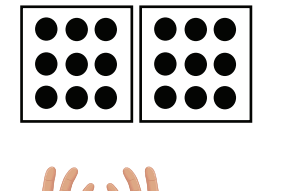
8 + 8 = _____



4 + 4 = _____

9 + 9 = _____

5 + 5 = _____



10 + 10 = _____

Directions: Use the Doubles mental math strategy to solve.

1 + 2 = _____ 3 + 3 = _____ 3 + 4 = _____

4 + 4 = _____ 5 + 6 = _____ 7 + 7 = _____

7 + 8 = _____ 8 + 8 = _____ 10 + 10 = _____

LESSON 2: ADDING AND SUBTRACTING BY COUNTING

APPLY

Directions: Use the counting on mental math strategy to solve the problems below.

ADD	SUBTRACT
3 + 12 = _____	8 – 6 = _____
10 + 6 = _____	15 – 10 = _____

Reflect

Directions: Reflect on your learning. Write or draw about which mental math strategy you prefer. Explain why.

LESSON 3: ADDING OR SUBTRACTING THE NUMBER 10

APPLY

Directions: Use the number chart to add or subtract 10.

21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

4 + 10 = _____ 16 – 10 = _____

10 + 7 = _____ 20 – 10 = _____

CHALLENGE:

Directions: Write and solve your own + 10 addition problem.

_____ + 10 = _____

LESSON 4: ADDING AND SUBTRACTING BY MAKING TENS

APPLY

Directions: Work with a partner to find all the ways to make 10.

1 +		= 10
2 +		= 10
3 +		= 10
4 +		= 10
5 +		= 10

6 +		= 10
7 +		= 10
8 +		= 10
9 +		= 10
10 +		= 10

Examples:

6 + 8

6 + **8** = 6 + **4 + 4**

4 + 4

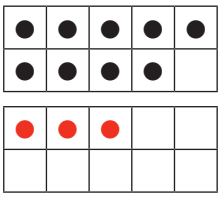
6 + 4 + 4 = **10** + 4

6 + 4 = 10

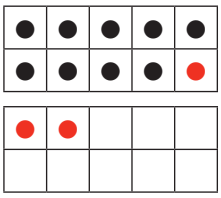
10 + 4 = 14

So, 6 + 8 = 14

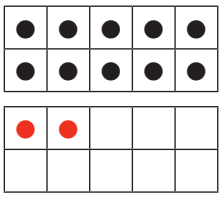
9 + 3



9 + 1 = 10



10 + 2 = 12



So, 9 + 3 = 12

15 – 7

15 – 5 = 10

7 – 5 = 2

10 – 2 = 8

So, 15 – 7 = 8

14 – 6

14 – ? = 10

So, 14 – 6 =

Directions: Use the Making Tens mental math strategy to solve these problems.

1.	5 + 6	5 + _____ = 10	So, 5 + 6 = _____
2.	7 + 4	7 + _____ = 10	So, 7 + 4 = _____
3.	8 + 5	8 + _____ = 10	So, 8 + 5 = _____
4.	13 – 3	13 – _____ = 10	So, 13 – 3 = _____
5.	12 – 5	12 – _____ = 10	So, 12 – 5 = _____
6.	18 – 9	18 – _____ = 10	So, 18 – 9 = _____

Reflect

Directions: Reflect on your learning. Write or draw about which mental math strategy you prefer. Explain why.

LESSON 5: STORY PROBLEMS ON ADDING

APPLY

Directions: Read the story problem. Use mental math strategies to find the answer. Then write a number sentence to show the problem.

1. Raja counted 7 ants crawling on the sidewalk. Then he found 3 more ants crawling. How many ants did Raja see in all?

_____ + _____ = _____

2. Miryam saw 8 birds flying in the sky. She also saw 4 birds sitting in a tree. How many birds did Miryam see in all?

_____ + _____ = _____

3. Mukhtar has 6 jelly beans in a jar. He has another 8 jelly beans in his pocket. How many jelly beans does Mukhtar have in all?

_____ + _____ = _____

4. Heba has 7 stickers. Her teacher gives her 9 more stickers. How many stickers does Heba have all together?

_____ + _____ = _____

Reflect

Directions: Reflect on your learning. Write or draw about which of the story problems was the most challenging to you. Explain your thinking.

LESSON 6: STORY PROBLEMS ON SUBTRACTING

APPLY

Directions: Read the story problem. Use mental math strategies to find the answer. Then write a number sentence to show the problem.

1. Salma has 18 figs. She eats 10 figs. How many figs does Salma have left?

_____ - _____ = _____

2. Ahmed gathers 15 rocks at the beach. He tosses 6 rocks into the water. How many rocks does Ahmed have left?

_____ - _____ = _____

3. Mustafa has 16 candies. He ate 6 candies. How many candies does Mustafa have left?

_____ - _____ = _____

4. Rashida bought 13 oranges. She gave 3 oranges to her father. How many oranges does she have now?

_____ - _____ = _____

Reflect

Directions: Reflect on your learning. Work with your Shoulder Partner to make a subtraction story problem.

LESSON 7: MENTAL APPLICATIONS ON ADDING

APPLY

Directions: Use a mental math strategy to solve the problem.

At 8 p.m., Omar saw 3 stars in the sky. At 9 p.m., he saw 13 stars in the sky. How many stars were added to the sky between 8 p.m. and 9 p.m. ?

8 PM

9 PM

_____ + _____ = _____

Reflect

Directions: Write or draw one way to solve for missing addends in addition problems.

LESSON 8: MENTAL APPLICATIONS ON SUBTRACTING

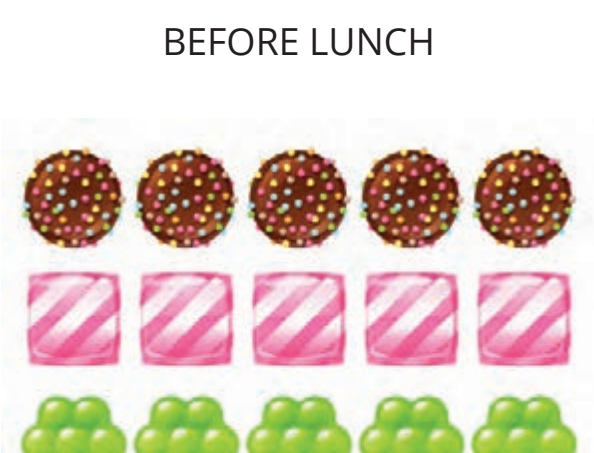
APPLY

Directions: Use a mental math strategy to solve the problem.

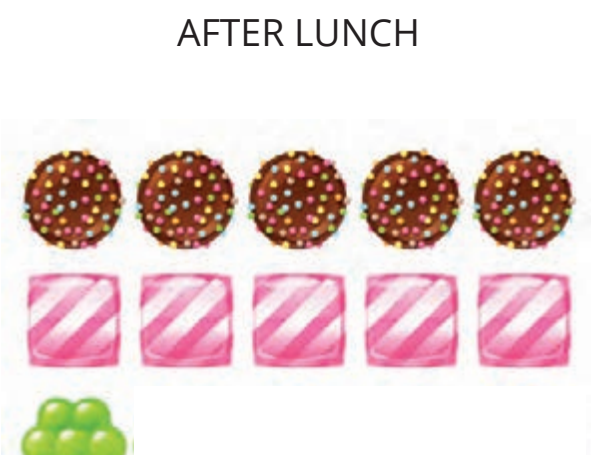
Before lunch, Aya had 20 candies. After lunch, Aya had 11 candies left. How many candies did Aya eat at lunch?

_____ - _____ = _____

BEFORE LUNCH



AFTER LUNCH



LESSON 9: MENTAL APPLICATIONS ON ADDING AND SUBTRACTING

APPLY

Directions: Use mental math strategies to solve each problem.

1. 6 + _____ = 12
2. 10 + _____ = 16
3. 13 – _____ = 9
4. 19 – _____ = 8
5. 10 + _____ = 19
6. 11 – _____ = 7

Reflect

Directions: Write a list of the mental math strategies you used. Put a star next to the one you used the most.

LESSON 10: ADDING USING THE 120 CHART

APPLY

Directions: Use the 120 Chart to play 101 and Over.

111	112	113	114	115	116	117	118	119	120
101	102	103	104	105	106	107	108	109	110
91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

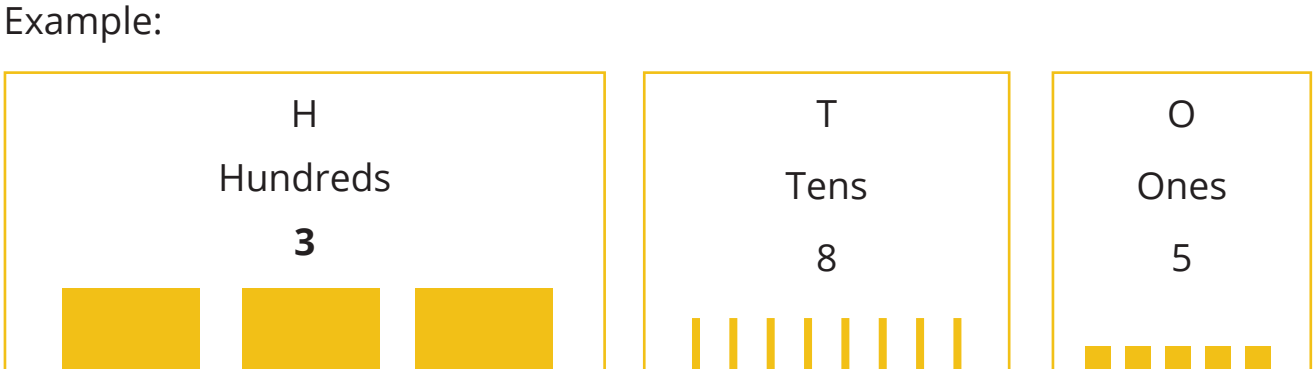
CHAPTER 3

LESSON 1: 3-DIGITS NUMBERS

APPLY

Directions: Write the numbers given by the teacher.

Example:



	Hundreds	Tens	Ones
1.	Value: _____	Value: _____	Value: _____
2.	Value: _____	Value: _____	Value: _____
3.	Value: _____	Value: _____	Value: _____
4.	Value: _____	Value: _____	Value: _____
5.	Value: _____	Value: _____	Value: _____

LESSON 2: MORE OF 3-DIGITS NUMBERS

APPLY

Directions: Play the place value game with your group. Record your numbers in the top boxes. Draw your place value pictures in the bottom boxes. Write your number on the line.

Hundreds	Tens	Ones

_____
Number

Hundreds	Tens	Ones

_____
Number

Hundreds	Tens	Ones

_____
Number

Hundreds	Tens	Ones

_____
Number

Reflect

Directions: Reflect on your learning. Answer the question below.

How can 3 have different values?

LESSON 3: STANDARD FORM AND EXPANDED FORM

APPLY

Follow the directions of your teacher and complete the table:

Standard Form	Expanded Form
542	500 + 40 +2

Reflect

Work with your partner to create 3-digits numbers in the standard and expanded form using the cards: .

2	3	6

LESSON 4: NUMBERS IN WORD FORM

APPLY

Standard Form	Word Form
1	one

Reflect

Directions: Write some numbers in word form. Check your work.

LESSON 5: MORE NUMBERS IN WORD FORM

APPLY

Directions: Copy the number on the board into the Word Form side of the chart. Then write the Standard Form of the number. The first one has been done for you.

Standard Form	Word Form
10	ten
	eleven
	twelve
	thirteen
	fourteen
	fifteen
	sixteen
	seventeen
	eighteen
	nineteen

LESSON 6: WRITING NUMBERS IN DIFFERENT FORMS

Reflect

I have 224.

Who has

300 + 50 + 3?

I have _____ .

Who has

_____ + _____ + _____ ?

I have _____ .

Who has

_____ + _____ + _____ ?

I have _____ .

Who has

_____ + _____ + _____ ?

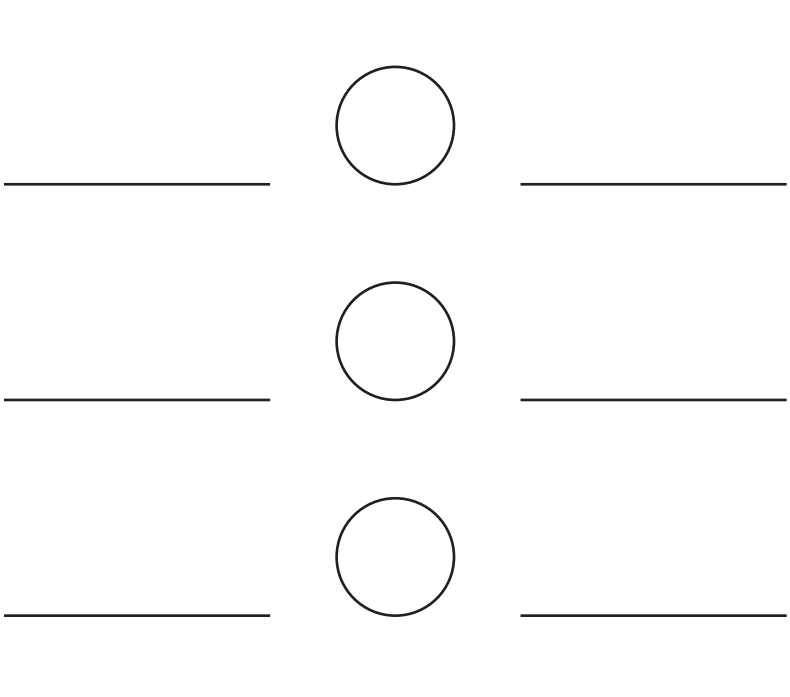
Circle the words that describe your thoughts and feelings about working on numbers in standard and expanded form. You can circle more than one.

fun easy difficult confusing challenging help!

LESSON 7: COMPARING NUMBERS

APPLY

Follow the directions, write the numbers, then compare and write the suitable sign (> , = , <) :



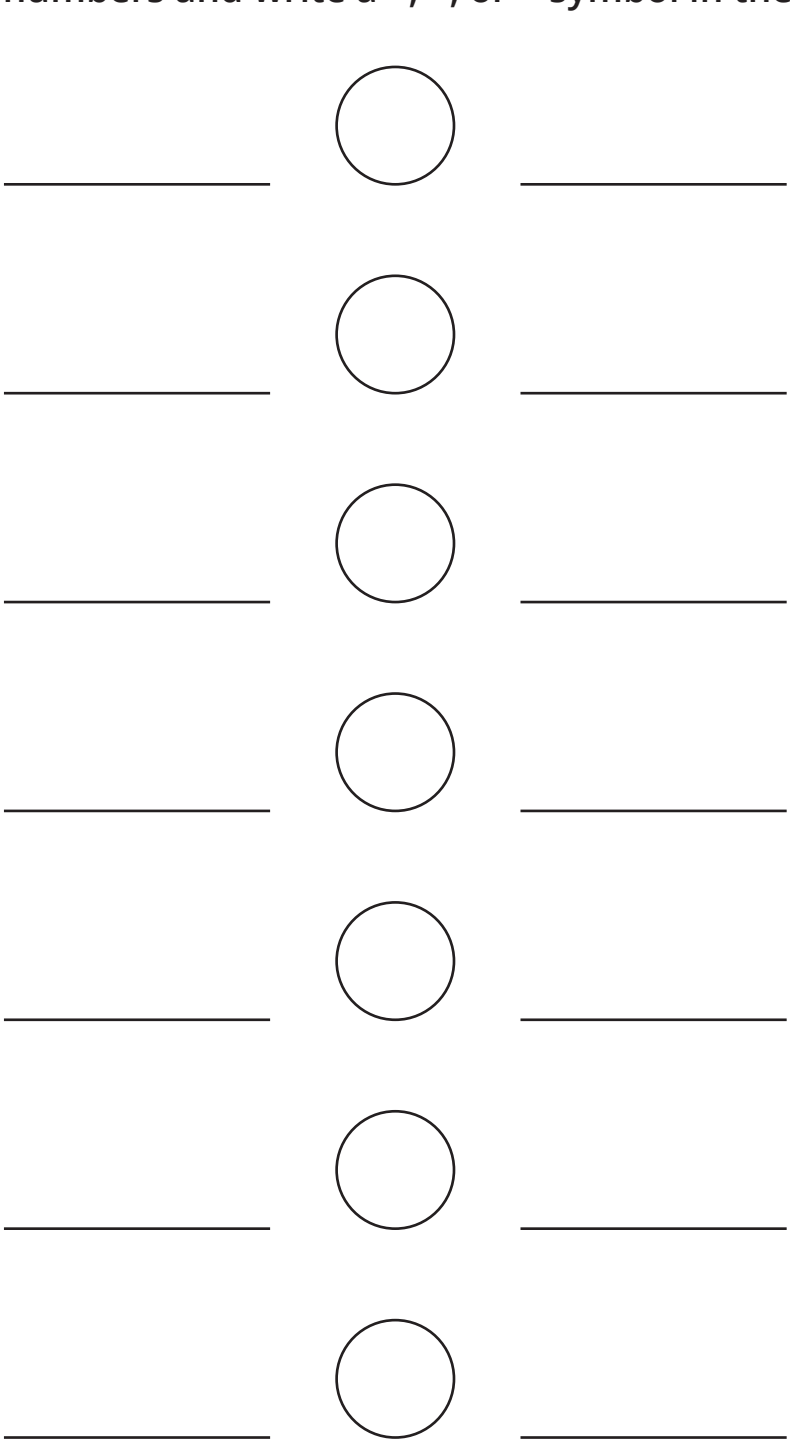
Write a number to get a correct statement:

1. 576 < _____
2. 907< _____
3. 100 > _____
4. _____ < 891
5. 126 < _____
6. 700 + 1= _____

LESSON 8: MORE OF COMPARING NUMBERS

APPLY

Directions: Choose 2 cards. Write the numbers in the blanks. Then compare the numbers and write a >, <, or = symbol in the circle.



Reflect

Directions: Reflect on your learning. Write or draw directions for how to compare numbers.

LESSON 9: ORDERING NUMBERS

APPLY

Directions: Write the numbers in order from least to greatest.

17	9	2	3	8

Directions: Write the numbers in order from least to greatest.

11	156	4	23	17

Directions: Write the numbers in order from greatest to least.

4	13	29	33	23

Directions: Write the numbers in order from greatest to least.

28	4	38	241	34

LESSON 10: MORE OF ORDERING NUMBERS

APPLY

Directions: Work with your Shoulder Partner to choose 5 game cards. Then write the numbers on your game cards from least to greatest.

Reflect

Directions: Write or draw what you did well and what you still need to work on.

What I did well

What I am still working on

CHAPTER 4

LESSON 1: COMMUTATIVE PROPERTY IN ADDITION

APPLY

Directions: Solve the problems below. Then rewrite the problems by switching the addends, and solve the new problems.

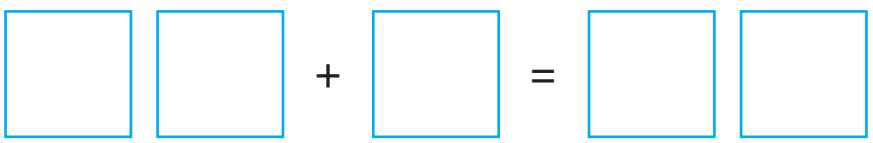
14 + 4 = _____	_____ + _____ = _____
9 + 15 = _____	_____ + _____ = _____
12 + 8 = _____	_____ + _____ = _____
8 + 9 = _____	_____ + _____ = _____

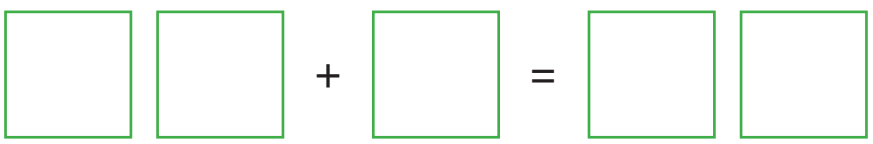
LESSON 2: MORE OF MENTAL APPLICATIONS ON ADDING AND SUBTRACTING

APPLY

Directions: Do the first problem with the teacher.
Solve the rest with your group.

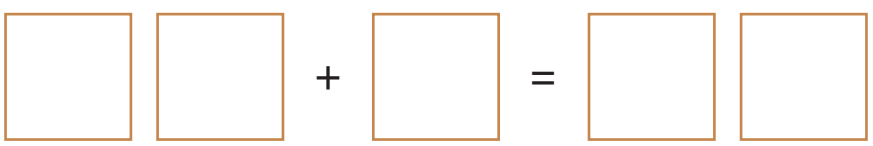
1. Roll the die. Write the number in the first box.
2. Roll the die again. Write the number in the second box.
3. Pick a card. Write the number in the third box.
4. Add to find the sum. Write the answer.

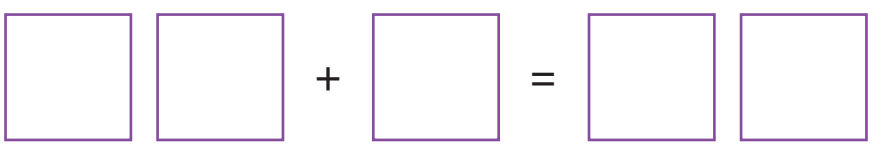


1. 

2. 

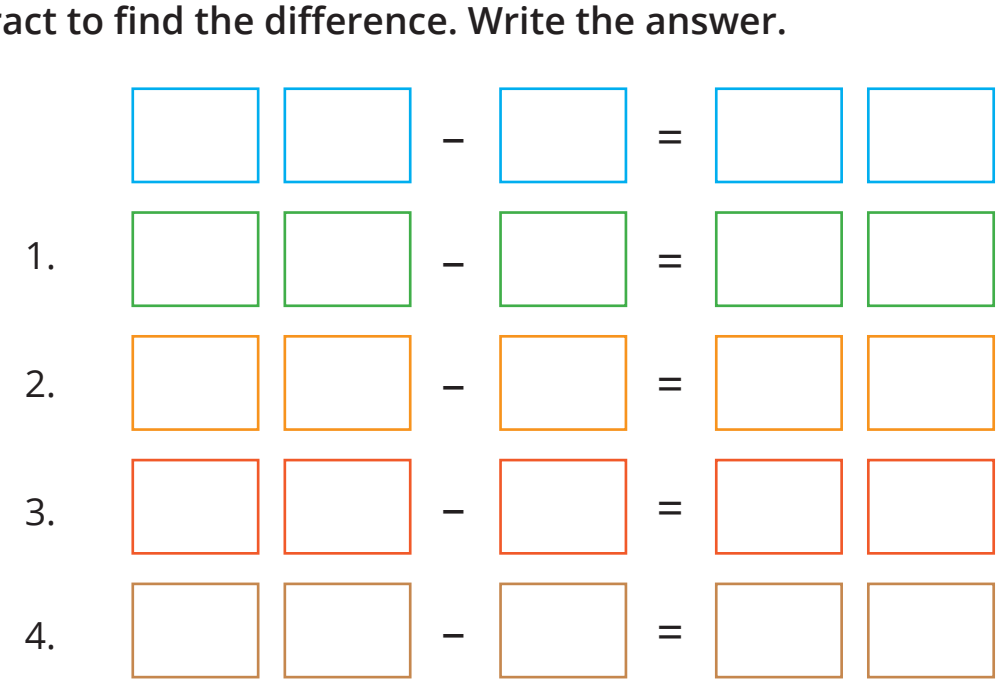
3. 

4. 

5. 

Directions: Do the first problem with the teacher.
Solve the rest with your group.

1. Roll the die. Write the number in the first box.
2. Roll the die again. Write the number in the second box.
3. Pick a card. Write the number in the third box.
4. Subtract to find the difference. Write the answer.



Reflect

Directions: Reflect on your learning. How did you use mental math strategies to solve the problems? How did you help each other solve the problems?

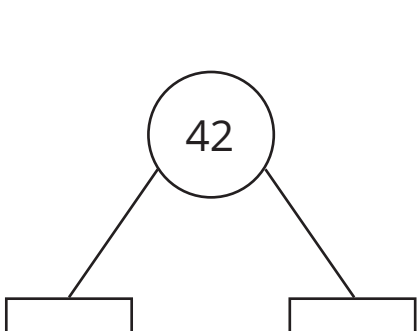
LESSON 3: DECOMPOSING NUMBERS INTO ONES AND TENS

APPLY

Directions: Decompose each number in two ways. Draw sticks to show Tens and dots to show Ones. Then write the Tens and Ones in the number boxes.

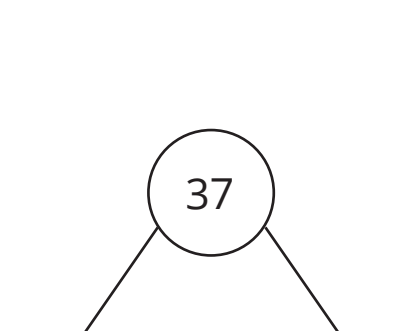
1.

Tens	Ones



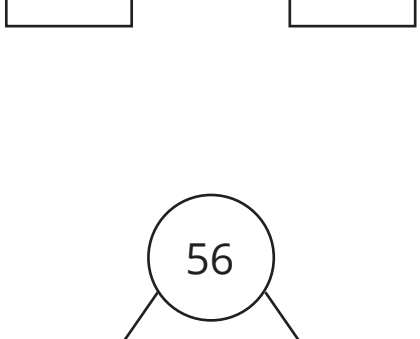
2.

Tens	Ones



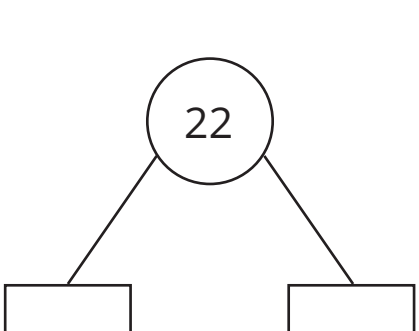
3.

Tens	Ones



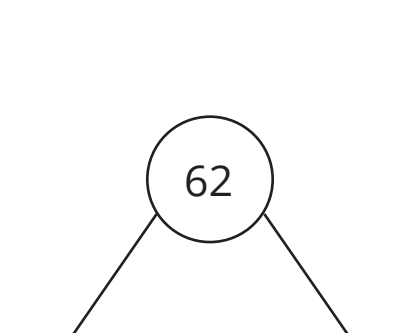
4.

Tens	Ones



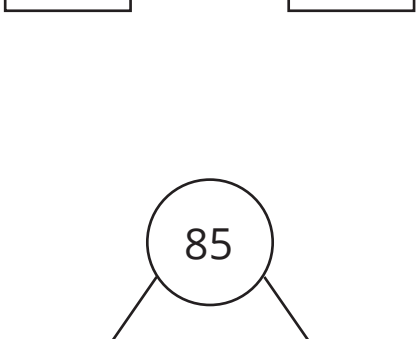
5.

Tens	Ones



6.

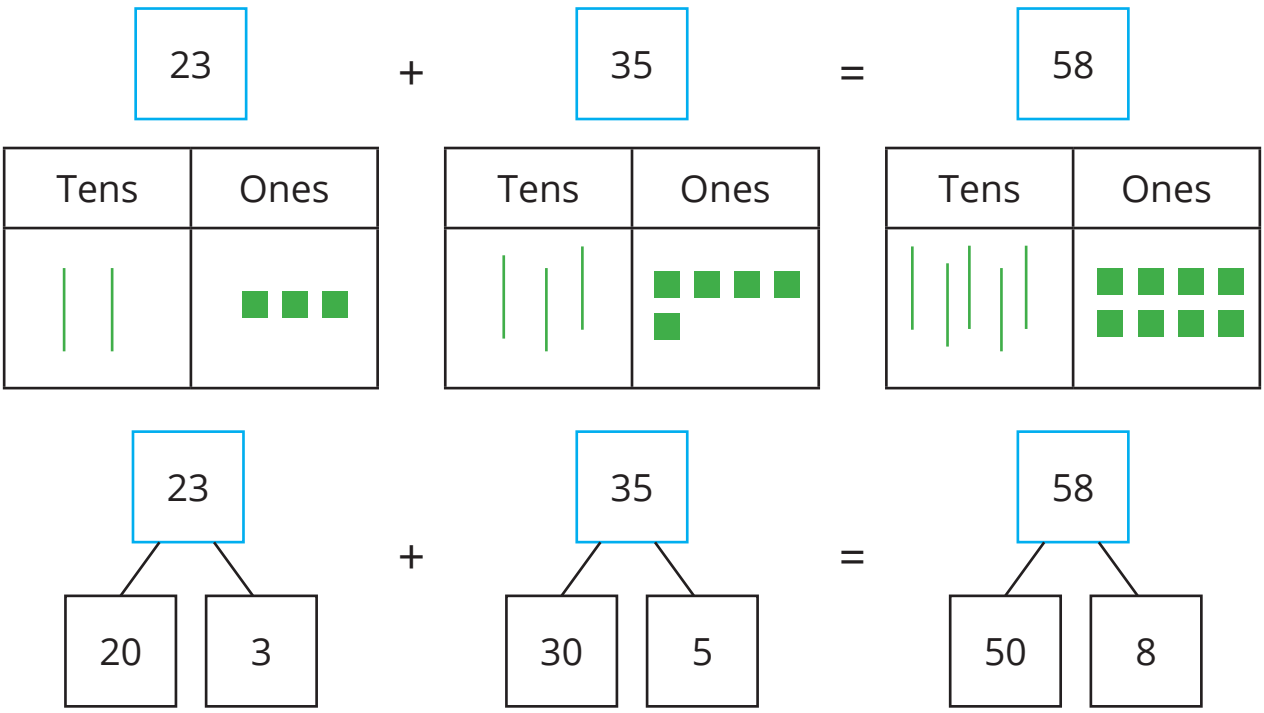
Tens	Ones



LESSON 4: ADDING WITHOUT REGROUPING

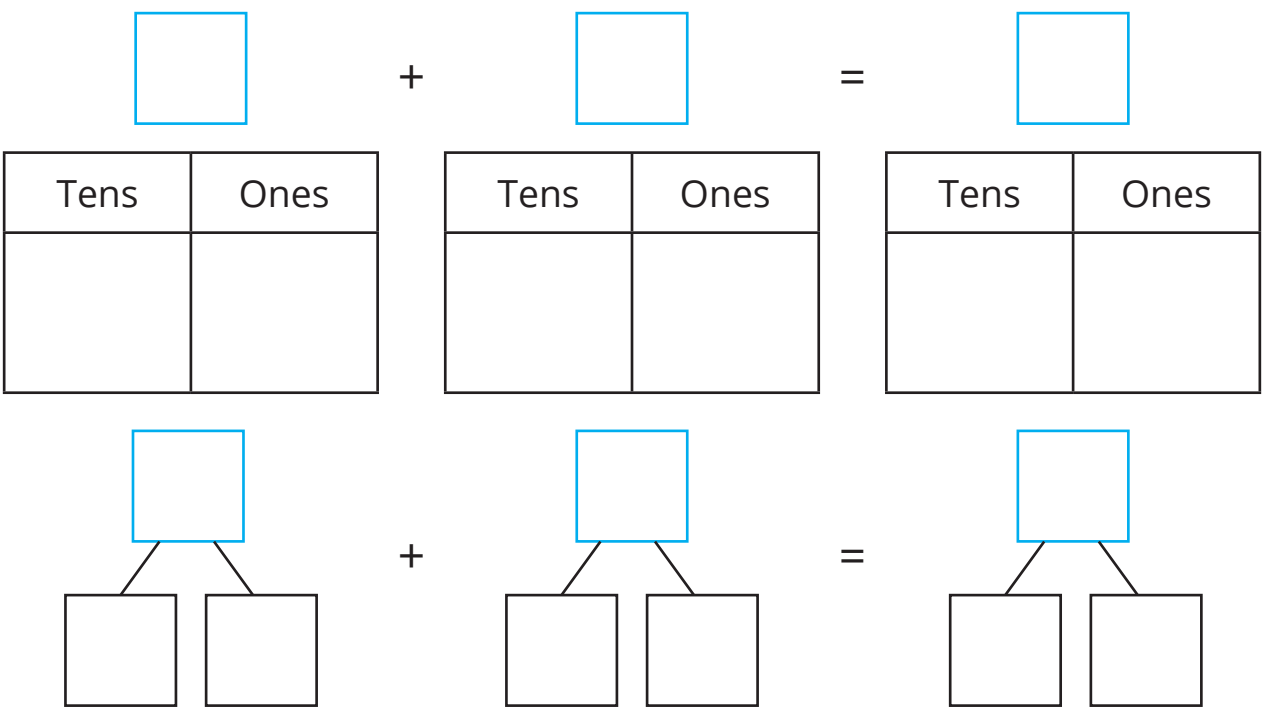
APPLY

Example: Hassan bought 23 chocolate cookies. He also bought 35 vanilla cookies. How many cookies does Hassan have in all?

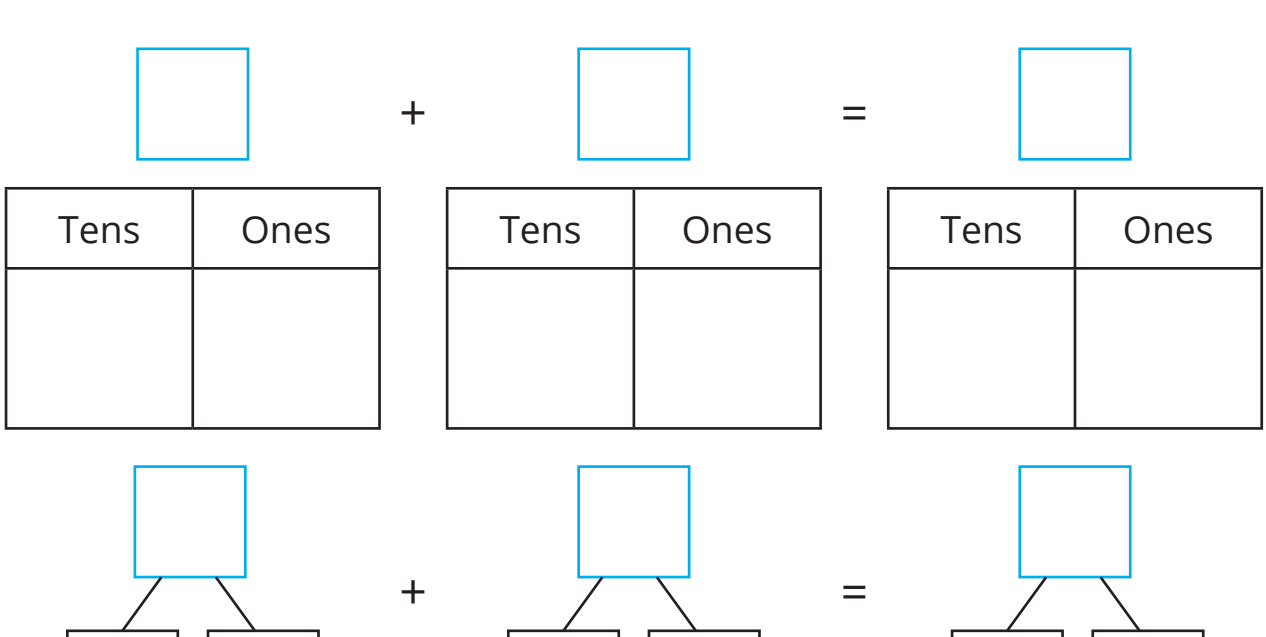


Directions: Read the problem and decompose to solve.

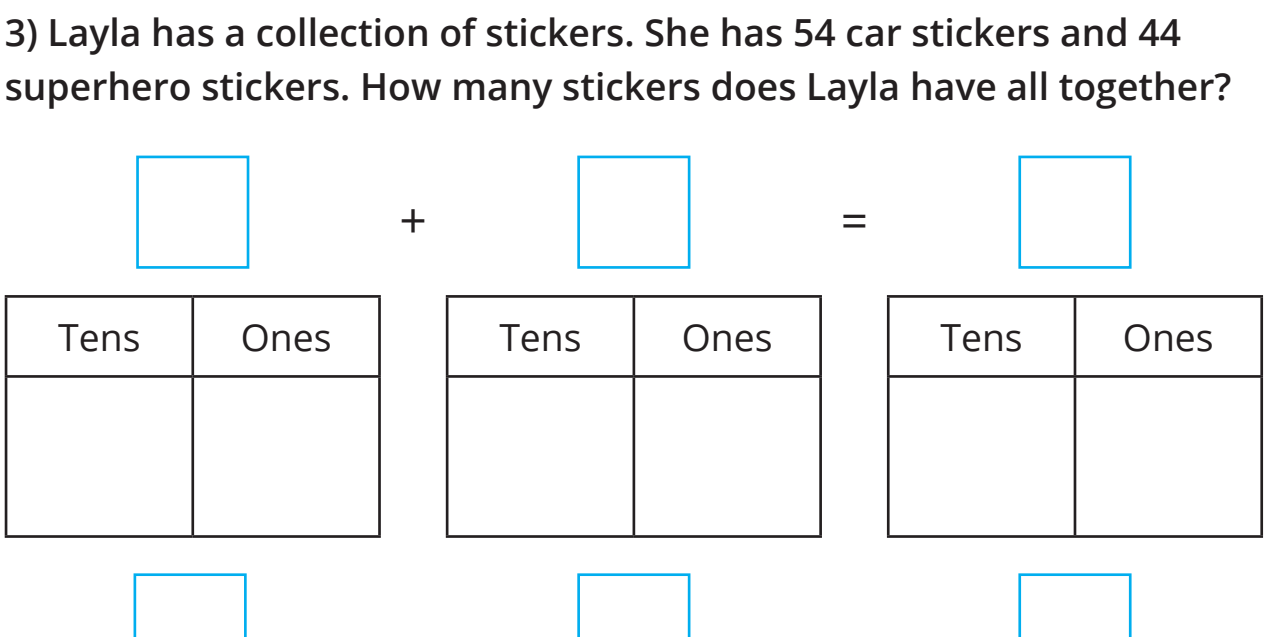
1) Miryam found 68 seashells on the beach. Her sister found 21 seashells. How many seashells did they find in all?



2) Aisha went on a bug hunt. She counted 62 ants and 26 crickets. How many bugs did she find in all?



3) Layla has a collection of stickers. She has 54 car stickers and 44 superhero stickers. How many stickers does Layla have all together?



Reflect

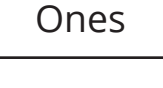
Directions: Reflect on your learning. Which decomposition method do you like the most? Use that method to find the sum of 57 and 31.

LESSON 5: SUBTRACTING WITHOUT REGROUPING

APPLY

Example: Sabrine made 37 biscuits with her mom. They ate 25 biscuits. How many biscuits were left?

37 – 25 = 12

Tens	Ones
	

37 – 25 = 12

37 → 30, 7

12 → 10, 2

30 – 20 = 10 7 – 5 = 2

Directions: Read the story problems and decompose to solve.

1) Rashida had 26 dates. She gave 13 to her sister. How many dates does Rashida have left?

__ – __ = __

Tens	Ones

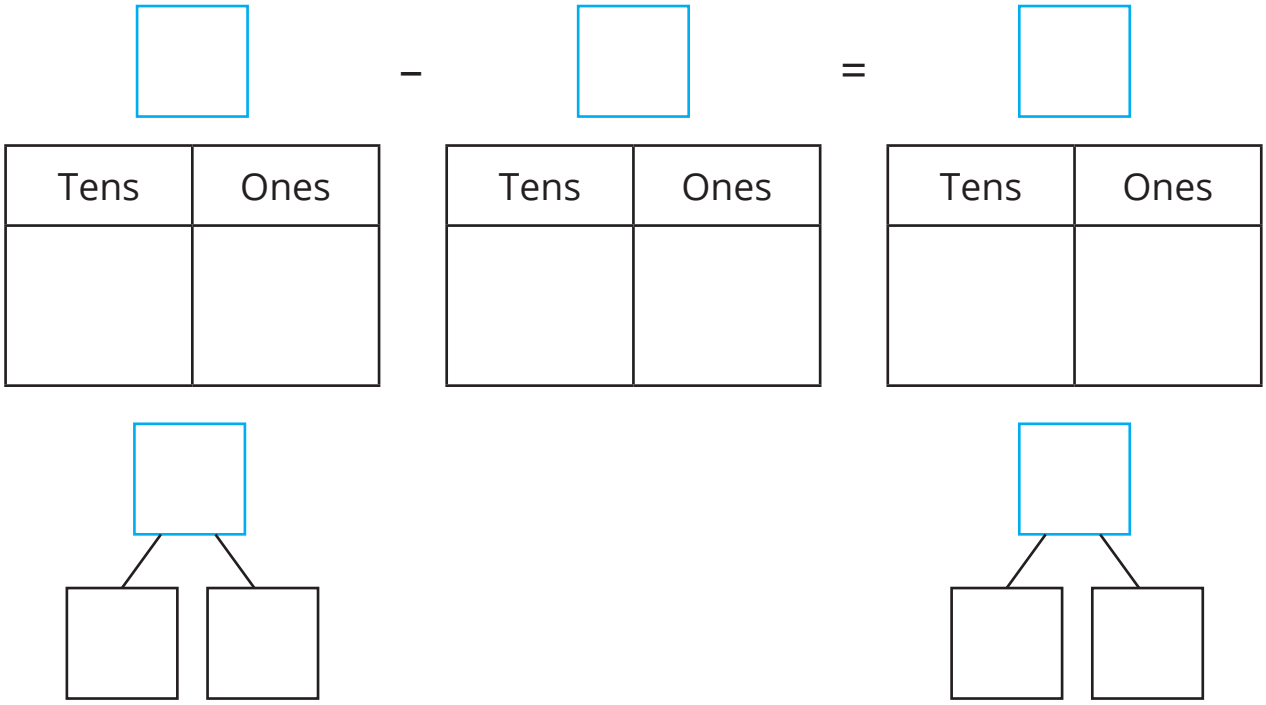
Tens	Ones

Tens	Ones

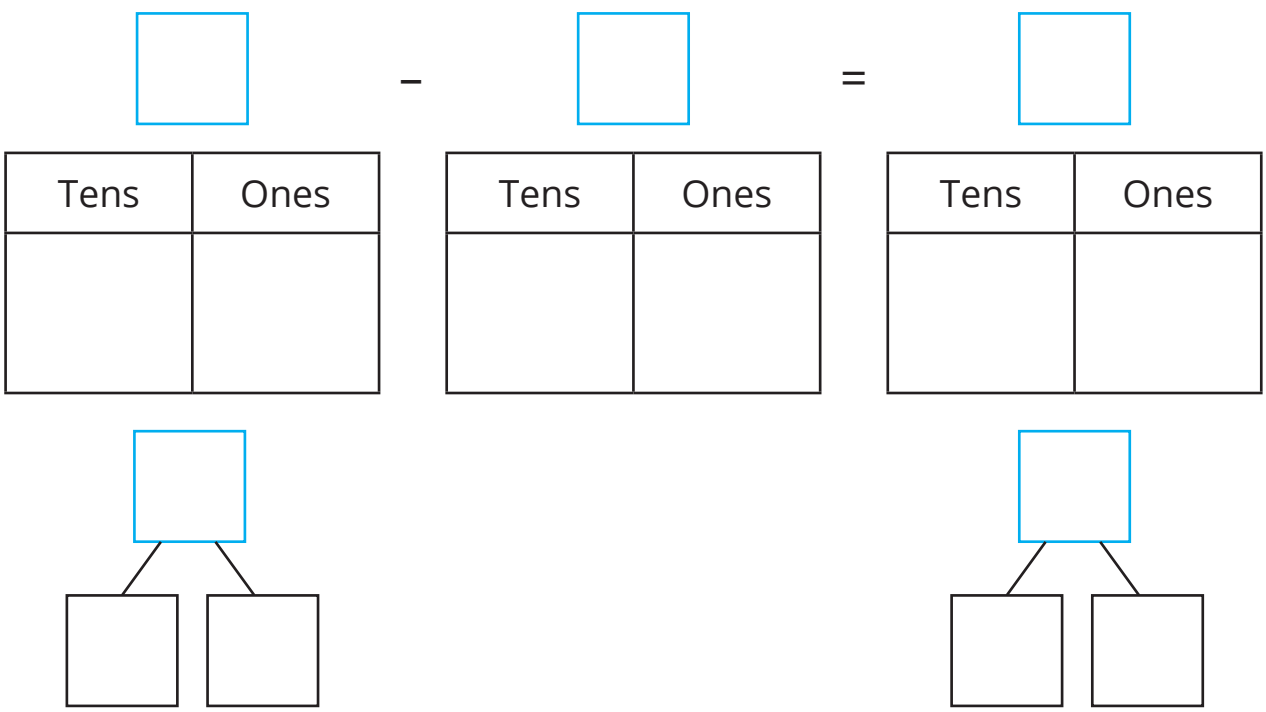
__ → __, __

__ → __, __

2) Samir had 65 coins in his collection but then he lost 24 of them. How many coins did he have left?



3) Kamilah sewed 59 beads on her dress. Unfortunately, 16 of them fell off. How many beads were left on her dress?



Reflect

Directions: Write one addition story problem and one subtraction story problem.

LESSON 6: ESTIMATING THE SUM AND THE DIFFERENCE

APPLY

Directions: Use the place value strategy to estimate the answers to the problems. Do not solve the problems.

1. 43 + 42	Estimate: _____
2. 23 + 58	Estimate: _____
3. 51 – 24	Estimate: _____
4. 67 + 25	Estimate: _____
5. Sheba had 33 LE. She earned an additional 29 LE doing her chores. Estimate how many LE she has now.	Estimate: _____
6. Raj has a 64-minute train ride. He has been on the train for 32 minutes. Estimate how many minutes are left on his train ride.	Estimate: _____

LESSON 7: COMPARING THE SUM AND THE ESTIMATION

APPLY

Directions:

1. **First, circle the numbers in the Tens place and add them together to estimate the sum.**
2. **Then decompose the numbers into Tens and Ones.**
3. **Find the sum.**
4. **Finally, compare the sum to your estimate. Are they close?**

47 + 24 Estimate: _____

_____ + _____ = _____

Tens Tens Tens Total

_____ + _____ = _____

Ones Ones Ones Total

_____ + _____ = _____

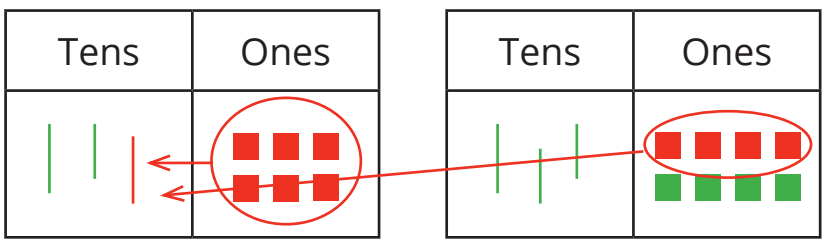
Tens Total Ones Total SUM

LESSON 8: ADDING BY REGROUPING ONES

APPLY

Example:

26 + 38 = ☐



Directions: Draw Tens sticks and Ones dots to represent each addend. Regroup the Ones. Find the sum.

56 + 35 = ☐

Tens	Ones

Tens	Ones

28 + 54 = ☐

Tens	Ones

Tens	Ones

29 + 43 = ☐

Tens	Ones

Tens	Ones

Reflect

Directions: Reflect on your learning. What do you think happens when there are too many Tens in the Tens place? Write or draw a picture to explain.

LESSON 9: MORE OF ADDING BY REGROUPING ONES

APPLY

Directions: Select cards and record the numbers to create addends. Draw Tens sticks and Ones dots to show each number. Find the sum. Regroup if needed.

1. ☐ + ☐ = ☐

Tens	Ones

+

Tens	Ones

2. ☐ + ☐ = ☐

Tens	Ones

+

Tens	Ones

3. ☐ + ☐ = ☐

Tens	Ones

+

Tens	Ones

4. ☐ + ☐ = ☐

Tens	Ones

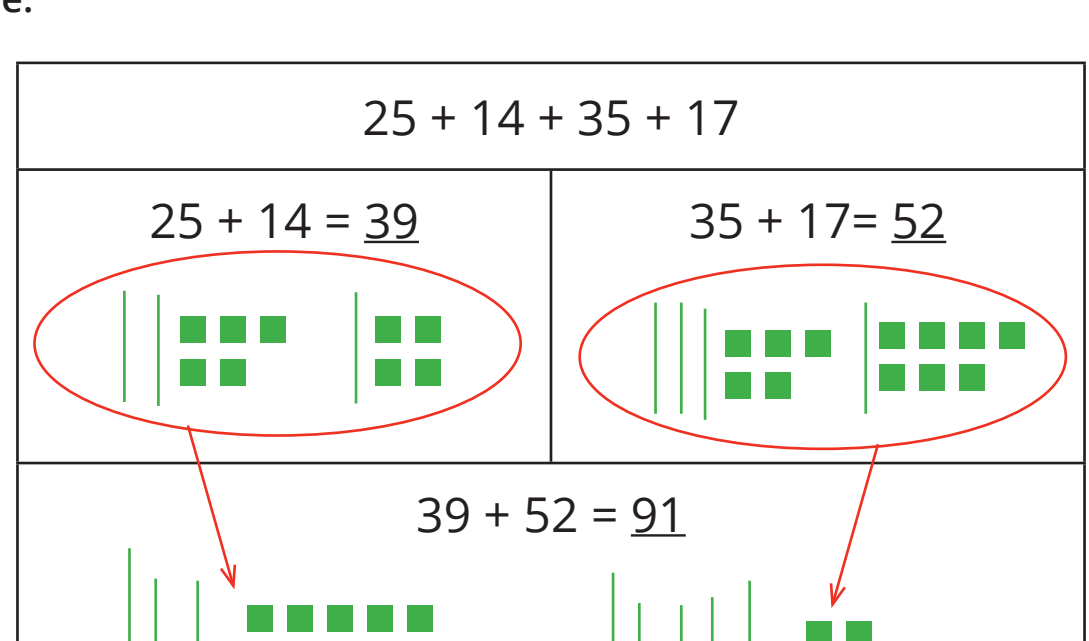
+

Tens	Ones

LESSON 10: ADDING MORE THAN TWO NUMBERS BY REGROUPING ONES

APPLY

Example:



Directions: Work with your group to solve.

1.

13 + 17 + 22 + 29	
_____+ _____ = _____	_____+ _____ = _____
_____+ _____ = _____	

2.

23 + 17 + 12 + 36	
_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	

3.

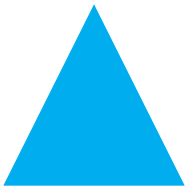
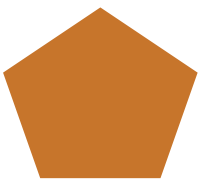
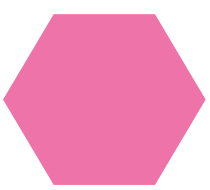
22 + 19 + 18 + 14	
_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	

CHAPTER 5

LESSON 1: ATTRIBUTED OF 2-DIMENSIONAL SHAPES

APPLY

Directions: Determine how many sides and vertices each shape has. Draw a star on all of the shapes that are quadrilaterals.

Shape	Name	Attributes	
		Sides	Vertices
	Triangle		
	Square		
	Rectangle		
	Trapezoid		
	Rhombus		
	Pentagon		
	Hexagon		

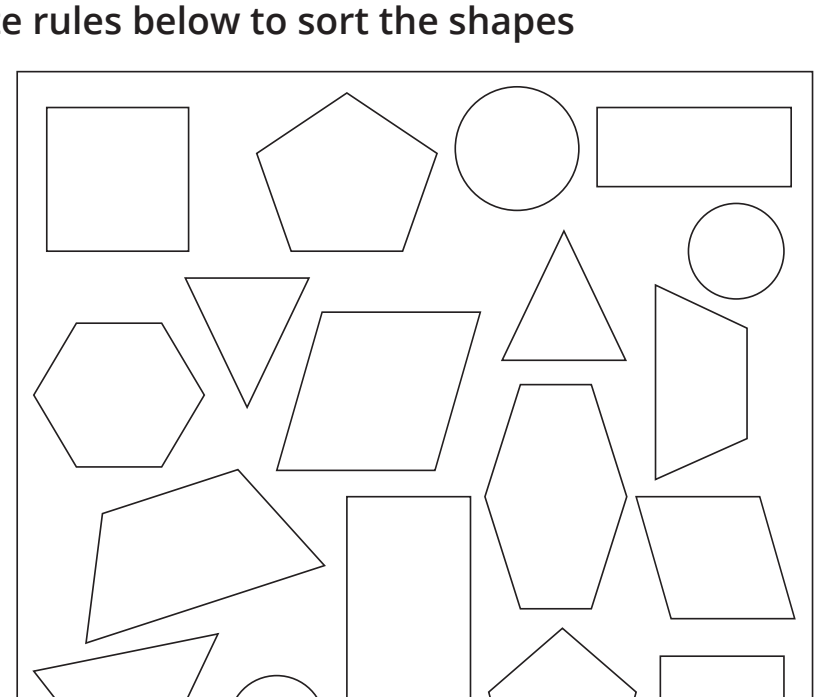
LESSON 2: SORTING 2-DIMENSIONAL SHAPES

APPLY

Directions: Follow the attribute rules below to sort the shapes

Attribute Sorting Rules

1. Color the shapes with 3 or fewer sides red.
2. Color the shapes with 4 sides and 4 vertices blue.
3. Color the shapes with more than 5 vertices green.
4. Circle the shapes that have 4 equal sides.
5. Cross out the shapes that have no straight sides or vertices.



Reflect

Directions: Reflect on your learning. What patterns did you notice as you sorted the shapes? What other ways could you sort the shapes? Write or draw your ideas.

LESSON 3: DRAWING GEOMETRIC SHAPES

APPLY

Directions: In boxes 1 to 6, draw the shapes your teacher describes.

What shape am I?	
1.	2.
3.	4.
5.	6.

What shape am I? student clues	
1.	2.

Reflect

Directions: Reflect on your learning. Is it possible to have a shape with two sides? What about two vertices? What about a shape with 10 sides? Write or draw your thoughts.

Two sides?

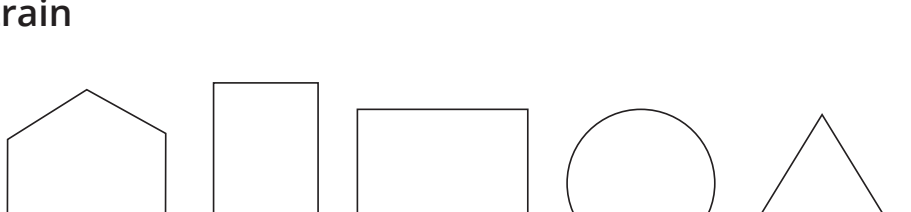
Two vertices?

10 sides?

LESSON 4: CREATING A PICTURE USING 2-DIMENSIONAL SHAPES

APPLY

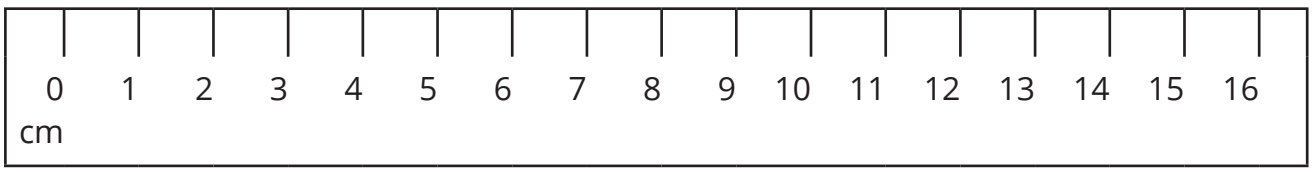
Use the 2-dimensional shapes to create a picture as: The sun , a cat , a flower, a train



LESSON 5: MEASURING THE LENGTH IN CENTIMETERS

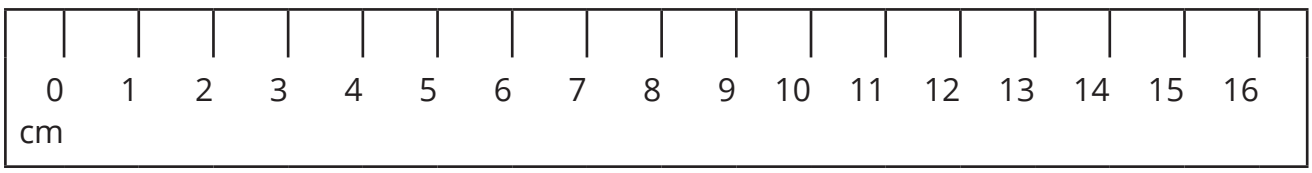
APPLY

Directions: Use the ruler to measure the length of each object in centimeters.



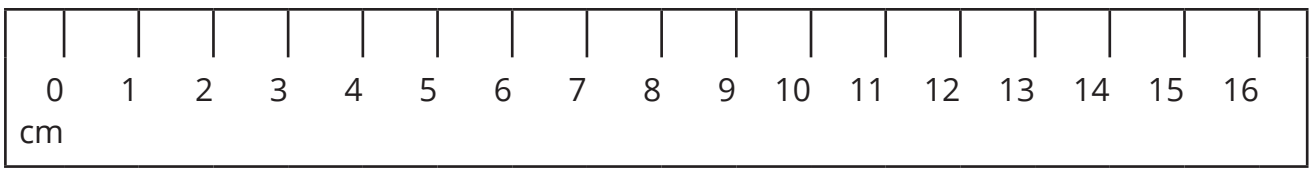
Crayon:

_____ centimeters



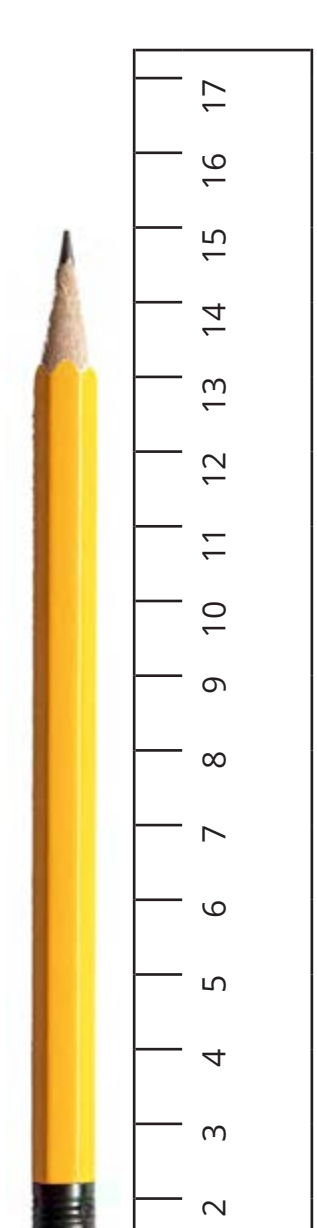
Paper clip:

_____ centimeters



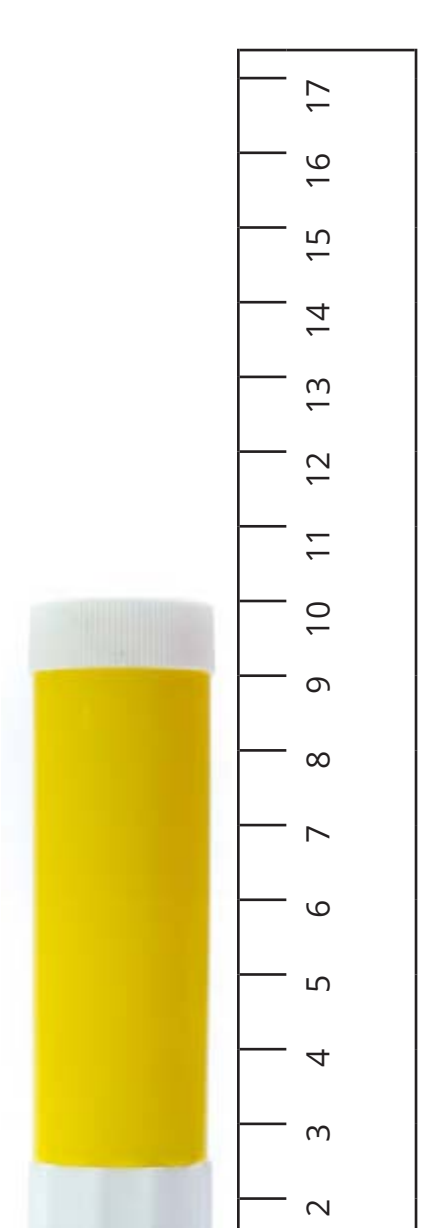
Pink eraser:

_____ centimeters



Pencil:

_____ centimeters



Glue stick:

_____ centimeters

LESSON 6: ESTIMATING THE LENGTH

APPLY

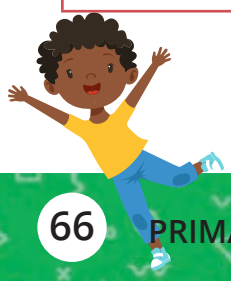
Directions: Work with your group to find objects that are the estimated length.

Estimated Length	Object
1 centimeter	
10 centimeters	
50 centimeters	
100 centimeters	

Reflect

Directions: Reflect on your learning. Estimate the length of the object your teacher shows and write your reasoning. Then share with your Shoulder Partner.

Object	Estimated Length	Reasoning
1.	_____ centimeters	
2.	_____ centimeters	



LESSON 7: MEASURING THE SIDE LENGTH OF A GEOMETRIC SHAPE

APPLY

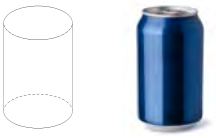
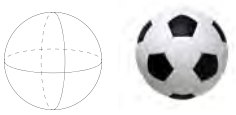
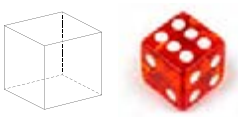
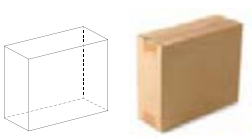
Directions: Measure one side of each shape. Record each measurement in the table below.

Object	Measurement
Triangle	_____ centimeters
Square	_____ centimeters
Rhombus	_____ centimeters
Rectangle short side	_____ centimeters
Rectangle long side	_____ centimeters
Trapezoid short side	_____ centimeters
Trapezoid long side	_____ centimeters
Pentagon	_____ centimeters
Hexagon	_____ centimeters

LESSON 8: ATTRIBUTES OF 3-DIMENSIONAL SHAPES

APPLY

Directions: Record the number of faces, edges, and vertices for each three-dimensional shape.

Name	Shape	Faces	Edges	Vertices
Square- based pyramid				
Cylinder				
Sphere				
Cube				
Rectangular prism				

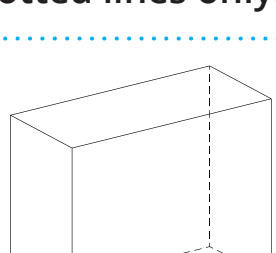
Reflect

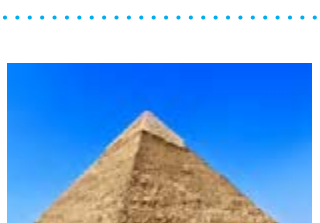
Directions: Write or draw what you learned today about the faces, edges, and vertices of three-dimensional shapes.

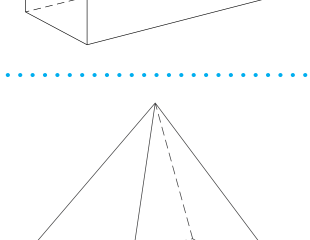
LESSON 9: SORTING 3-DIMENSIONAL SHAPES

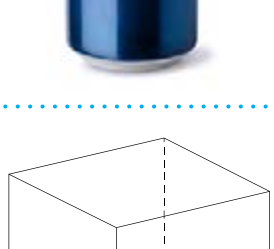
APPLY

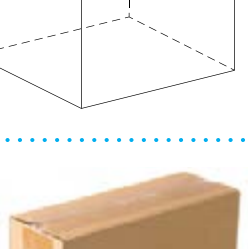
Directions: Cut out the shapes and sort into the chart on the next page. Cut on the blue dotted lines only.

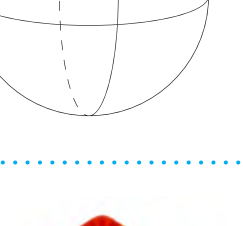












Three-Dimensional Shape Attribute Rules

Shapes with 4 or more faces	Shapes with 0 edges, faces, or vertices	Shapes with 1 vertex
Shapes with 6 or more edges	Shapes with at least 1 circle face	Shapes with more than 2 faces but fewer than 6

Reflect

Directions: Write an attribute rule that fits two or more three-dimensional shapes. Then glue down the shapes that fit your attribute rule.

LESSON 10: CREATING 3-DIMENSIONAL SHAPES

APPLY

Write the name of the 3D shapes that you created then write one property for each:

CHAPTER 6

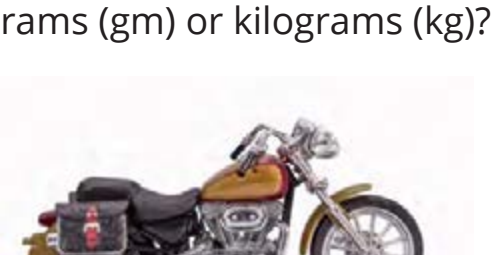
LESSON 1: MEASURING MASS

APPLY

Directions: Decide which would be the best unit of measurement for weighing each object. Circle your answer.

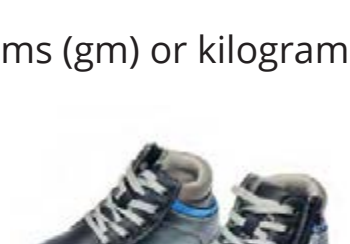
1. grams (gm) or kilograms (kg)?

2. grams (gm) or kilograms (kg)?

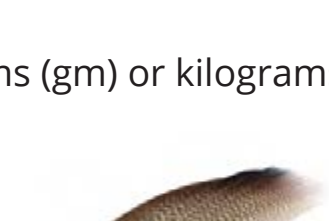


3. grams (gm) or kilograms (kg)?

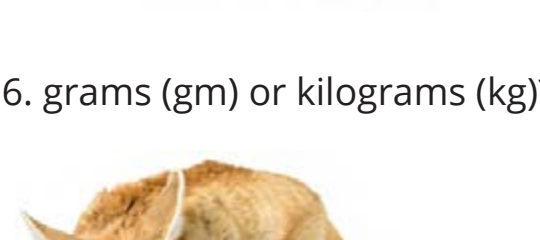
4. grams (gm) or kilograms (kg)?



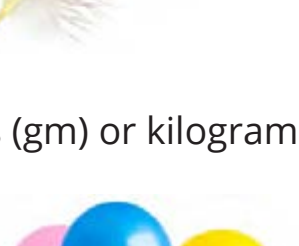
5. grams (gm) or kilograms (kg)?



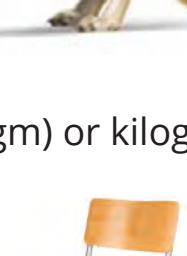
6. grams (gm) or kilograms (kg)?



7. grams (gm) or kilograms (kg)?



8. grams (gm) or kilograms (kg)?



Reflect

Directions: Reflect on your learning. Think of an item at your home whose mass you would measure in grams and one you would measure in kilograms. Draw the items. For each picture, label which unit of mass you would use.

LESSON 2: UNITS OF MEASURING MASS

APPLY

Decide some masses can be measured by:

1 gram _____

1/2 kilogram _____

1 kilogram _____

5 kilograms _____

10 kilograms _____

100 kilograms _____

LESSON 3: APPLICATIONS ON MEASURING MASS

APPLY

Directions: Read the word problem, write a number sentence, and solve to find the answer. Label your answers with gm (gram) or kg (kilogram).

1. Aisha has 1 dog that weighs 10 kilograms and 1 cat that weighs 5 kilograms. How much do both of Aisha's pets weigh together?

_____ + _____ = _____

2. Raja has two toy balls that each weigh 100 grams. He puts them both in his bag to take to the park. How much do Raja's toy balls weigh together?

_____ + _____ = _____

3. Fatima has a bicycle that weighs 12 kilograms. Her sister has a tricycle that weighs 9 kilograms. Their dad wants to carry them at the same time. How much do the bikes weigh all together?

_____ + _____ = _____

4. Mukhtar had a bucket filled with 65 grams of sand to build a sandcastle. His friend brought another bucket with 26 grams of sand. How many grams of sand do they have all together to build a sandcastle?

_____ + _____ = _____

Reflect

Directions: Why is it important for us to be able to measure the mass of things?

LESSON 4: MORE APPLICATIONS ON MEASURING MASS

APPLY

Directions: Read each problem and solve. For numbers 5 and 6, write your own math word problems with weights.

1. Mostafa has a bag of rocks that weighs 19 kilograms. He found 7 more kilograms of rocks and put them in his bag. How many kilograms of rocks does Mostafa have in his bag in all?

_____ + _____ = _____

2. Yasmin bought a bag of sugar that weighed 80 grams. She made cookies and used 20 grams of sugar. How many grams of sugar does Yasmin have left?

_____ – _____ = _____

3. Heba collected two bags of seashells. One weighed 4 kilograms and the other weighed 5 kilograms. Her sister collected two bags of seashells. One bag weighed 6 kilograms and the other weighed 5 kilograms. How many kilograms of seashells do Heba and her sister have in all?

_____ + _____ = _____

4. Karim has a box of crackers that weighs 78 grams. He eats 19 grams of crackers. How many grams of crackers are left in the box?

_____ – _____ = _____

My Mass Story Problems

5.
6.

LESSON 5: TIME A.M. OR P.M.

APPLY

Directions: Decide if the activity happens in the a.m. or p.m. Circle your answer.

		a.m. p.m.
		a.m. p.m.
		a.m. p.m.
		a.m. p.m.

Reflect

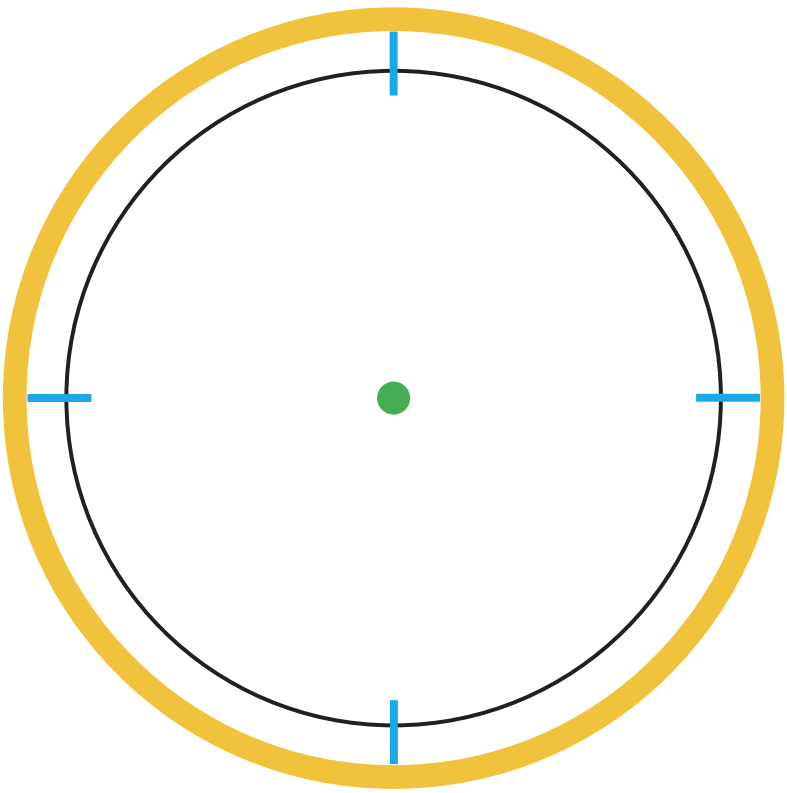
Directions: Draw or write about an activity that you do in the a.m.

Directions: Draw or write about an activity that you do in the p.m.

LESSON 6: CREATING AN ANALOG CLOCK

APPLY

Directions:



1- Split the model into hours.

2- Draw the hours and the minutes hands.

3- Read and write the time that you get.

LESSON 7: READING TIME WITH HALVES

Reflect

Directions: Write or draw something you learned today about telling time to the half hour.

LESSON 8: APPLICATIONS ON TIME

APPLY

Directions: Your teacher will say a time. Show the time on the analog and digital clocks below.

1

:

2

:

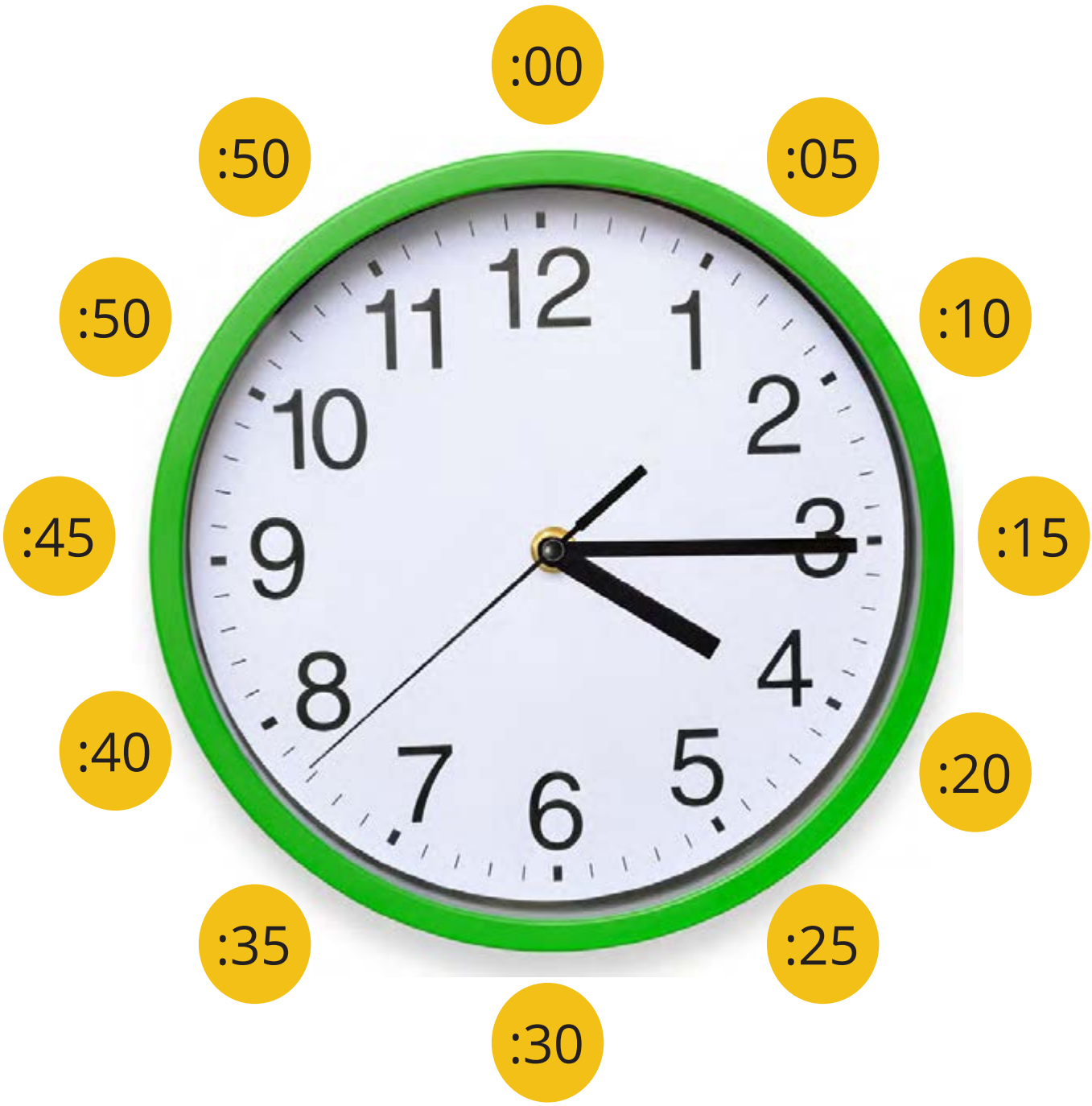
LESSON 9: READING TIME IN MINUTES

APPLY

Directions: Draw triangles clearly and neatly for one minute. Your teacher will tell you when to start and stop. Then, count your triangles and record your total.

How Many Triangles in One Minute?

Total number of triangles _____


:00
:05
:10
:15
:20
:25
:30
:35
:40
:45
:50
:50
12
1
2
3
4
5
6
7
8
9
10
11

Reflect

Directions: Write or draw something that you learned today about the minute hand.

LESSON 10: MORE APPLICATIONS ON TIME

APPLY

Directions: Match the clock with the time.

Quarter to 1

12:45

Quarter past 3

3:15

Quarter to 5

4:45

Quarter past 7

7:15

Quarter past 2

2:15

Reflect

Directions: Reflect on your learning. What is one thing you are proud of learning about time? What is one thing you are still working on? Write about or draw your thinking.

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